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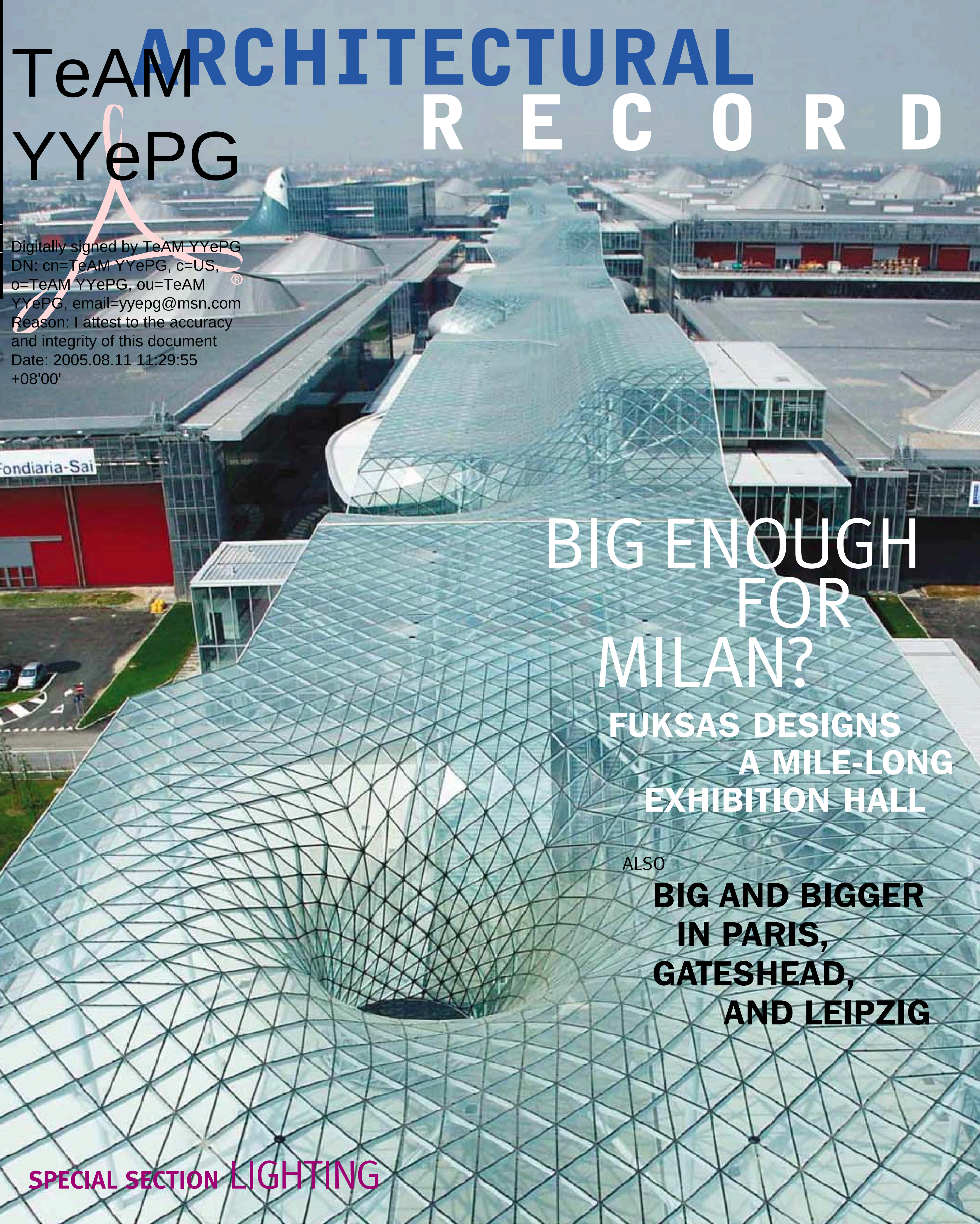

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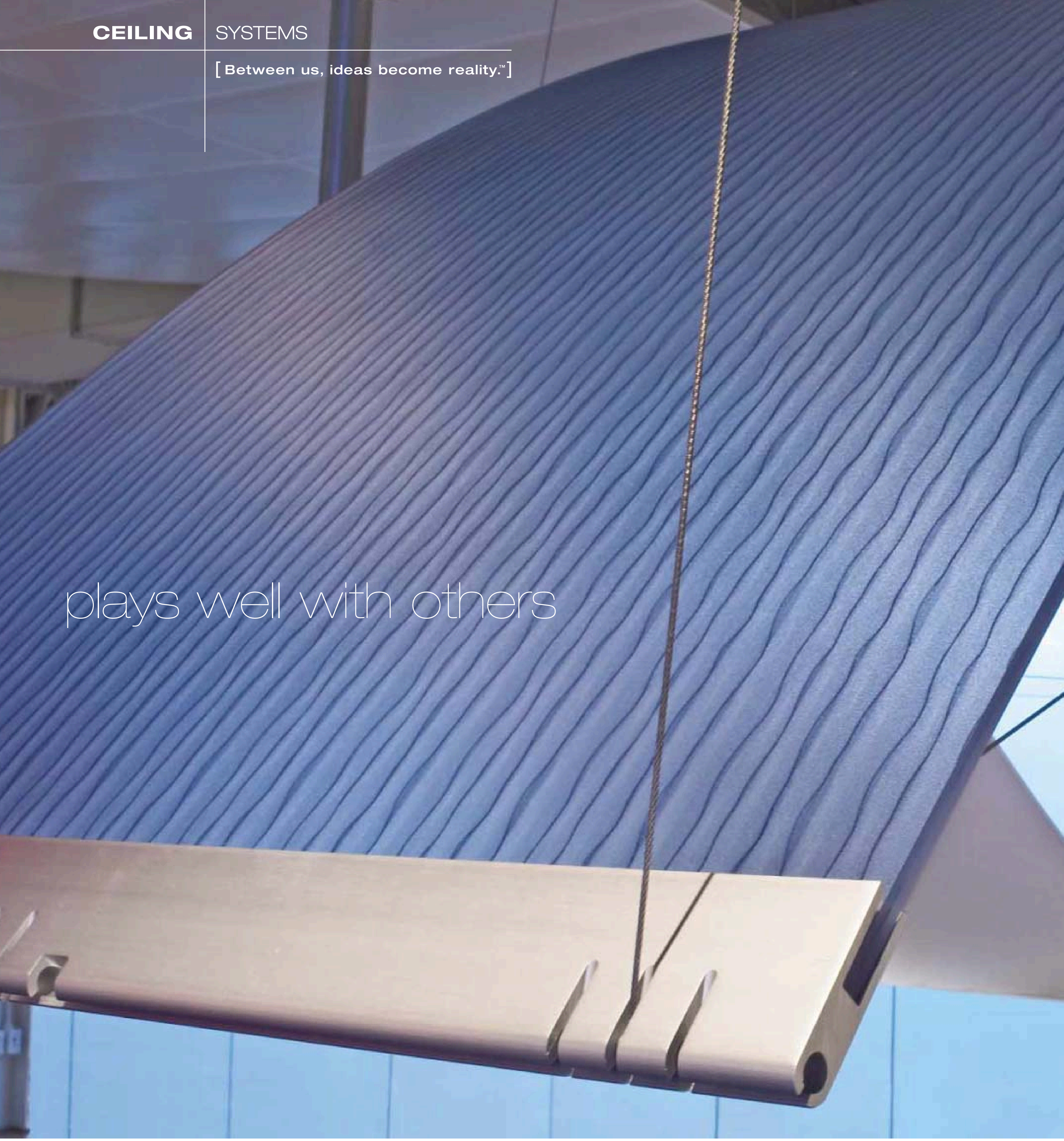
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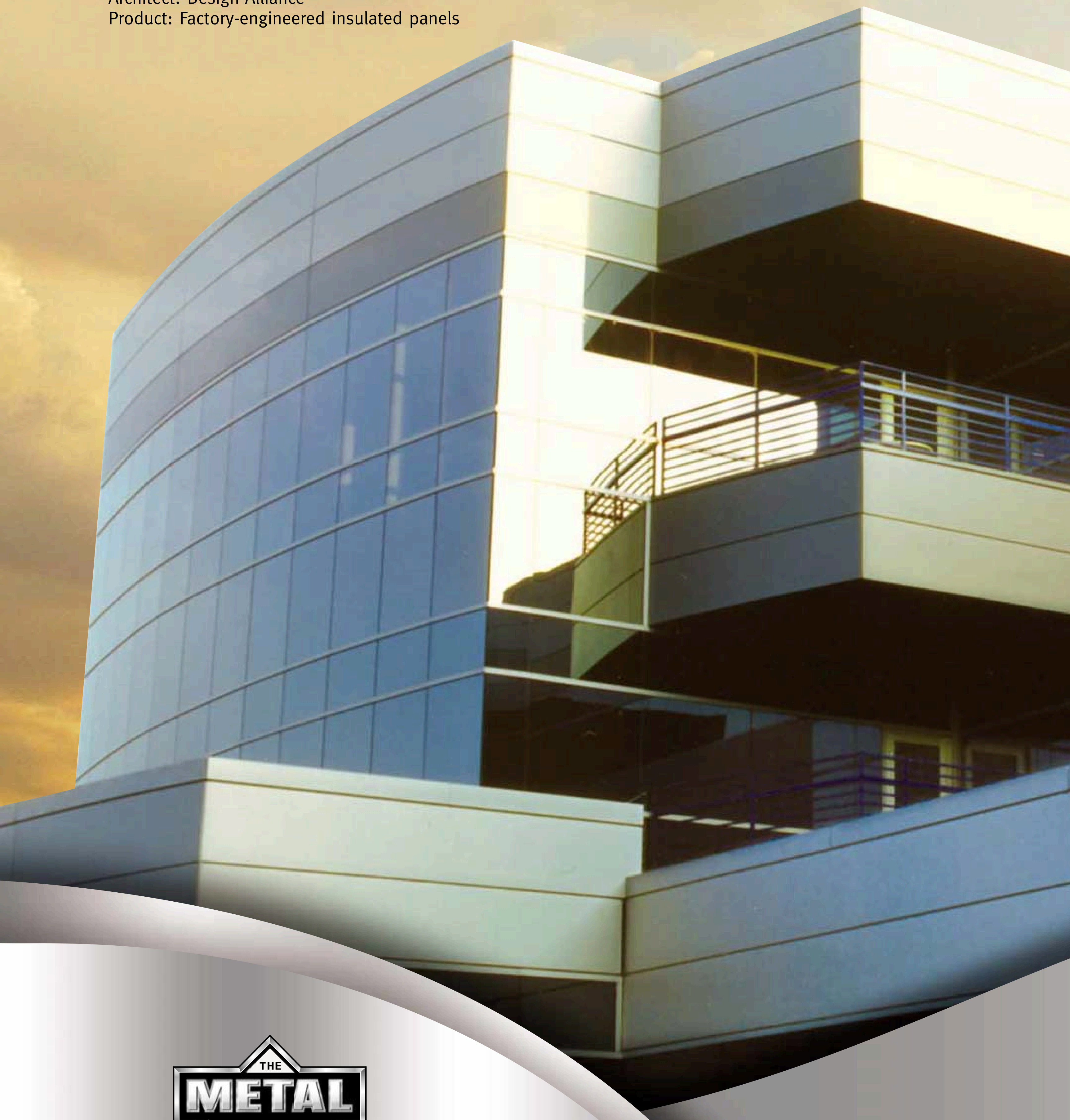

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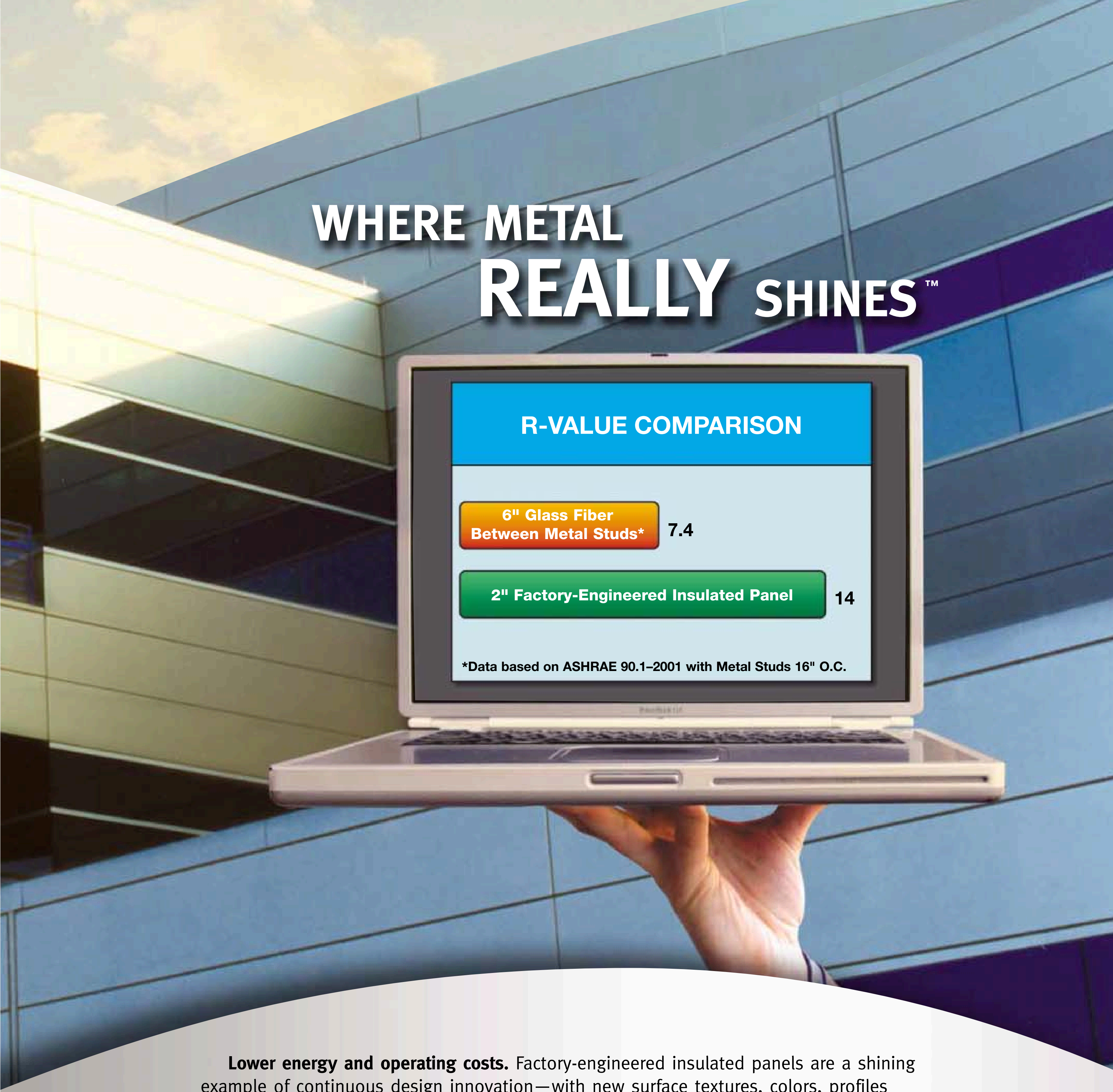
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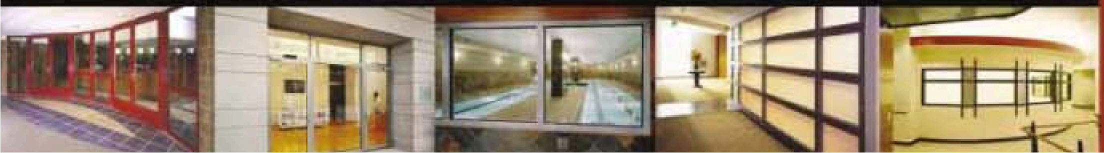

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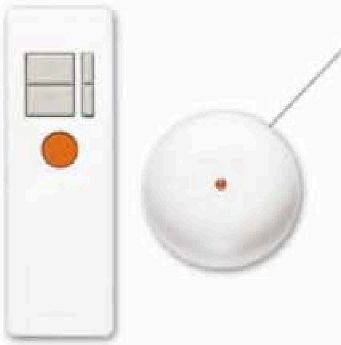

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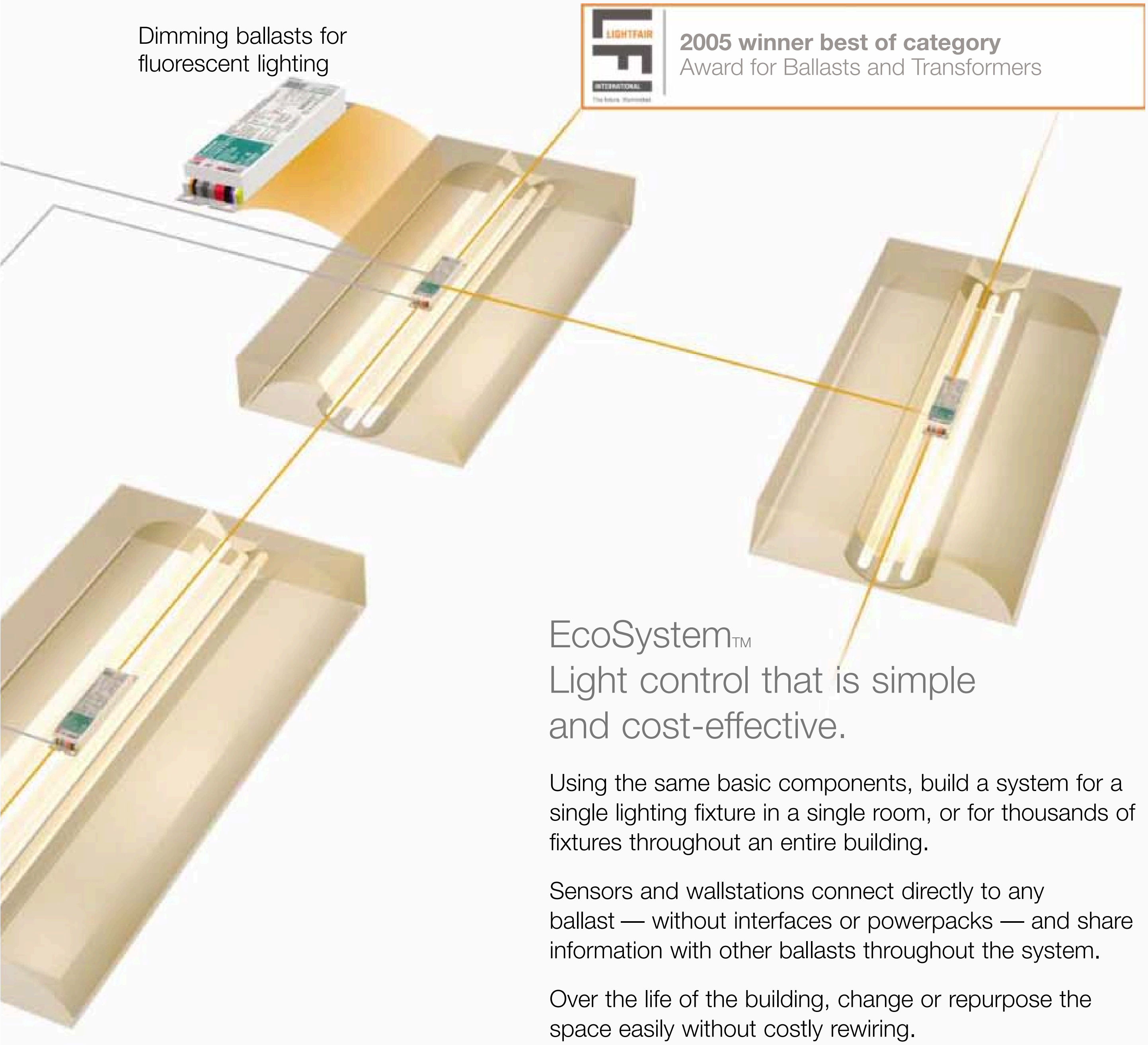
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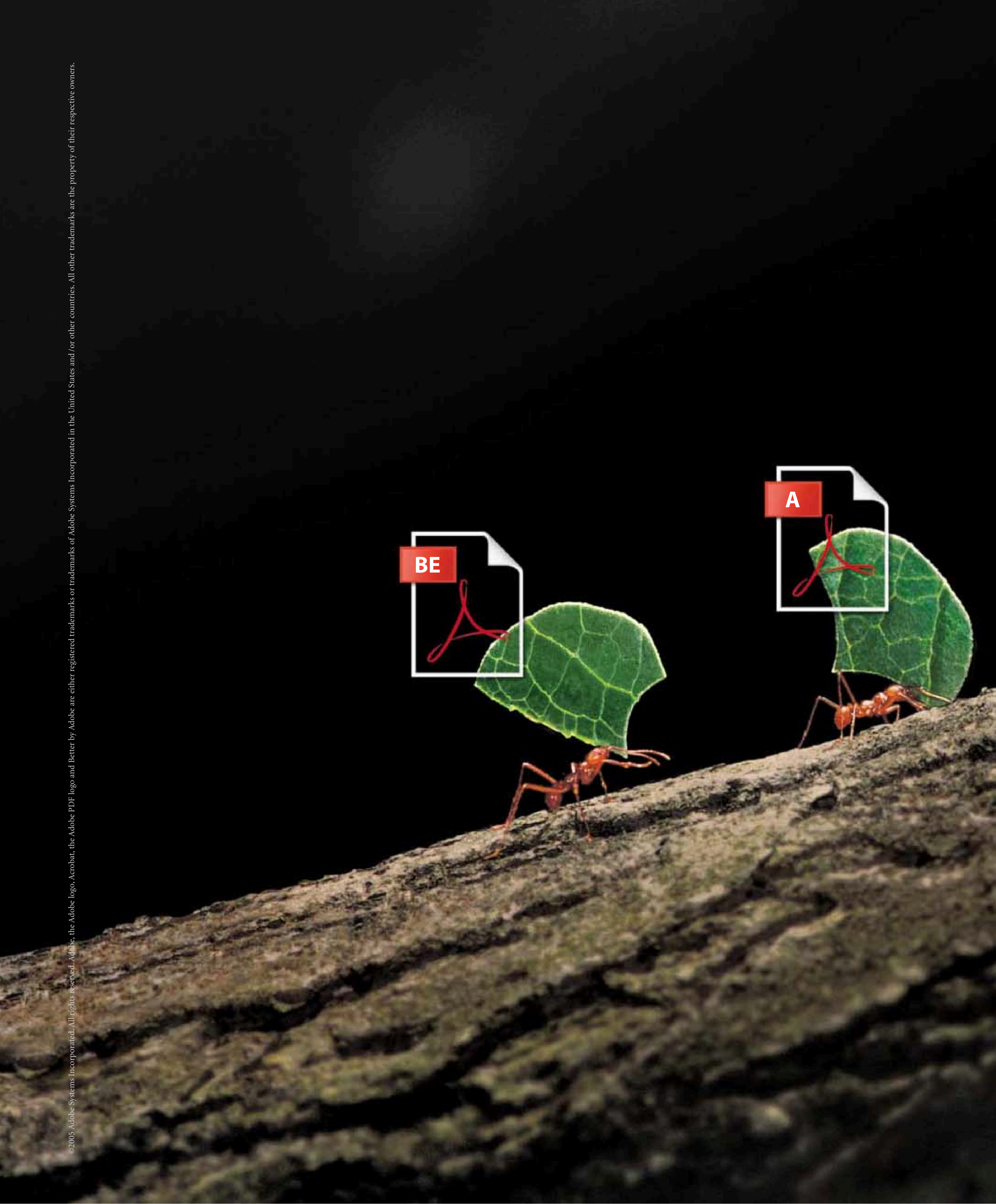

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On the Cover: *Milan Trade Fair, by Studio Fuksas. Photograph by Giuseppe Blengini/Studio Fuksas*
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August 2005

Building Types Study

College and university building remains strong, and planners are looking closely at how new projects contribute to the overall feel of a campus. See the projects in our magazine and six additional projects exclusive to the Web.

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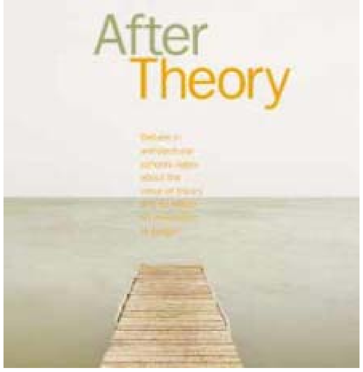


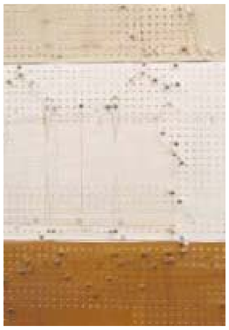
Letters to the Editor

Our June feature "After Theory" by Michael Speaks has raised a lot of eyebrows and has garnered many responses. We're publishing several of the letters on our Web site. Find out what other readers have to say on the topic of the value of theory.

Courtesy Escada

Quarterly Lighting

We're darting across international datelines to report on how designers around the world are tackling diverse lighting challenges. Peruse projects from Moscow, Frankfurt, and Palm Springs.



Walldrobe/Wearpaper
Courtesy Ben Pell

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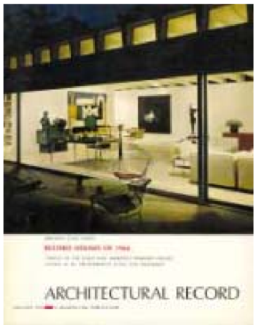
Discover the many facets of the design firm Miloby Ideasystem. Also, have a closer look at an architectural spin on fashion—a wallpaper-clothing combo.



Residential

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Three Little Letters

Editorial

By Robert Ivy, FAIA

As if we didn't have enough initials to keep up with, three little letters now demand remembering. You may never have heard of the Union Internationale des Architectes, or U.I.A., but don't remain ignorant. This international organization, which holds a large gathering every three years, purports to represent the worldwide community of architects and their shared interests, a tall order in an increasingly global, though fractured, civilization. The U.I.A.'s recently concluded triennial Congress and Assembly, which was held in Istanbul, Turkey, from July 3 to 10, deserves a retrospective look from both sides of the Bosphorus.

First, a bit of background. Founded in 1948, the organization has wobbled from initially lofty goals to the present, with varying degrees of efficacy. In the past decade, its proceedings have occasionally seemed centered on arcane legalisms, though in fact, many topics have been of import to architects everywhere. Like the United Nations, the subject matter has sometimes been occluded by polemics, by political posturing and U.S. bashing, and plagued with financial woes (who pays for this uber-organization?). Few serious designers have given the U.I.A more than a lazy glance, but the world has changed.

This July witnessed a kind of perceptual shift, a subjective realization that the congress had been vivified. Attendance provided a key indicator: In 2005, energy fairly crackled around the gathering, as upwards of 7,500 architects flew into Istanbul for a weeklong, self-styled architectural bazaar. Dashikis, saris, and fezzes blended with blue jeans in a buzzing polyphony emblematic of the disparate character of the participants.

Youth added to the buzz, mobbing keynote speakers such as Michael Sorkin and Moshe Safdie, FAIA, like rock stars after each performance, and peppering them with bids for attention. Holding the congress adjacent to the nation's preeminent architecture school, the Istanbul Technical University, enriched proceedings too often dominated by 40-somethings. Kids were everywhere.

Organizers, including the current president, Turkish-born Suha Ozkan, Hon. AIA, as well as the 26,400 members of the Chamber of Architects of Turkey, served up a wealth of programmatic offerings in a variety of locales, providing a disconcerting range of events at any time. Which one to choose? Twin, simultaneous speakers often vied for attention, as did multiple panelists presenting academic papers, scattered across the cityscape.

Yet the real draw lay not in the substance of the remarks (who, after all, will remember exactly what Odile Decq said, except "to resist"), but in the mélange. Chance encounters with colleagues known and unknown, the extended conversations over cocktails, the disjunctures that brought small shocks of recognition, all added up to a broad, if incoherent overview of this confluence of people and ideas. That conceit worked. Such collisions produced their own palpable power.

Architects naturally took to the streets of the Byzantine and Ottoman capital, where, enraptured beneath the sublime dome of the architect Sinan's Suleymaniye Mosque, they could look over and spy another transfixed architecture-lover, and a conversation might ensue. Mutual appreciation—of the great treasury of architecture and urbanity—further strengthened incipient bonds.

Delegates at the assembly's final three days, which constitutes a gathering of representatives of the national member associations, reported that, despite initial political posturing, events proceeded more smoothly than in the past. A new president, Gaetan Siew from Mauritius, will take the helm, leading the organization through its next great assembly in Turin, Italy, in 2008. Tokyo will follow three years later.

At a time when international commerce seems white-hot, and all architects want to work in each other's backyards, the need for places of debate and discourse, in matters as lofty as the future of our cities or as thorny as professional reciprocity, will only increase. We encourage the increasing maturation of international organizations like the U.I.A., with its blend of academia, youth, socializing, and locale, and we are already booking our tickets to Italy for the next round.

Robert Ivy

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Letters

Leave theory alone

The architecture coverage in the June issue was thoroughly engaging, though it was surprising to see that RECORD had allowed itself to become a forum for political and economic ideology. Such was the impression given by the piece bearing the disingenuous title "After Theory" by Michael Speaks [page 72], which reads like a memo in the culture wars. This humorless, anti-intellectual attack on "theory" was gratuitous at best, cynically opportunistic at worst. Having been told that "theory" is no good for capitalism, can we expect to hear next that it is unpatriotic? It is embarrassing that this posture is being falsely attributed to an entire generation of younger architects and academics. Still, it's apparently more fun for some to join the market fundamentalist party than it is to risk thinking imaginatively and critically.

—Reinhold Martin, Associate Professor of Architecture, Columbia University, and principal, Martin/Baxi Architects

Not the end of theory

I agree with Michael Speaks that design theory is finally and fortunately shedding the negativism and nihilism of Deconstruction and Marxism. His lucid essay "After Theory" in the June issue also celebrates the rise of the "post-critics," who have rejected "criticality" in favor of engagement with the marketplace and embraced proactive, so-called "projective" practices. After a generation of bingeing on abstract theory, it is time for vanguard architects to start addressing the many problems that face society. The rise of young, innovative "workshop" practices represents a return to architecture as craft, albeit high-tech.

Does this mean the end of theory? I hope not. That would only ensure critical theorists will have their revenge in the next cycle. And there is no way for our sophisticated architectural culture not to be theoretical—at least not since Alberti and Palladio raised our craft to a discipline and discourse on a par with science and the humanities. Our brains will always tend to be ahead of our hands, even though some things are better learned through the encounter with materials and tools. Although some breakthroughs come from the workshop floor, expensive and long-lived works of architecture and urbanism need intelligent and careful thought. Let's continue to be theoretical, but in a more pragmatic way that addresses environmental, social, and economic problems and opportunities, as well as aesthetic issues.

Let's also remember that not all the strategies and solutions will need to be new or innovative. Architectural production is not just market- and technology-driven. It is also an expression and embodiment of culture, which typically changes more slowly and incrementally than science and technology. Architects can help make sure people are neither overwhelmed by these changes nor left behind by them. Let's stop the pendulum before it swings from too little theory to too much theory. Maybe a little balance—that would be radical.

—Doug Kelbaugh, FAIA, Dean, University of Michigan Taubman College of Architecture and Urban Planning
Ann Arbor, Michigan

Need: theory and courage

Despite its due criticism of previous theory, Michael Speaks's essay provides yet another reactionary theoretical analogy to gnaw at the roots of the profession. Yes, working design in a spreadsheet mind-set complete with CNC milling as the place holder for the obsolete dot matrix printer is theoretically much more efficient for the innovative small practice. One can argue that efficiency breeds solutions, but at what cost? If the profession sacrifices a complex model of what architecture is and can be, where does that take us?

Architecture as information and production becomes merely a generation of speculation in steady supply instead of the very physical connective tissue of culture it has been and desperately needs to be. Thinking and doing are interconnected, but merely switching tools and terminology never generates innovation. Let's hope we will have the courage as educators, students, and professionals alike to pursue any new truth we discover—imperfect though it may be—by any and every means available to us.

—Melissa Matos
Los Angeles

Craft, not art form

"Pleased" barely describes my reaction to Speaks's essay. An architectural "theory" is woefully outclassed by those in physics or chemistry. But I am mostly concerned that being "cool" and "engaged" will soon become discarded theories in a changing world. Speaks's views would resonate more forcibly had he ratcheted up his thinking and viewed architecture as a craft, which it is, rather than an art form struggling to find an academic home.

—James A. Gresham, FAIA
Tucson

Of babies and bathwater

The "theory" that Michael Speaks addresses is not theory, but a recent bias of ideology: neo-Marxist criticism. At best, it's at the extreme end of theory.

We need to distinguish the difference between Theory, Criticism, Commentary, and Ideology. Speaks urges us to jettison "theory" and concentrate on a market-savvy design method. Design method, in its revival from the 1960s, is also a part, but not the most important part, of architectural theory.

The assertion that "theory," as Speaks abuses the term, is "not just irrelevant but continues to be an impediment" not only lacks finesse, but sense. He needs only a dictionary to learn that theory is "the general or abstract set of principles regarding a fact, science, or art." Architectural theory, the body of knowledge that defines practice, is what we know about architecture, and more important, what we want and need to know about architecture. Without theory, architectural writing is empty rhetoric, whether by Hannes Meyer or Michael Speaks.

But let's not throw out theory with the latest ideological bathwater. We must reserve for theory its role as a producer and sustainer of architectural knowledge.

—Eugene Kupper, architect and Professor Emeritus of Architecture, UCLA

Corrections

In the July issue's archrecord2 Work feature [page 48], designer Mitch McEwen's name is misspelled. In June's product review of storm-resistant windows and doors [page 208], the wrong image ran with the description of Cornell Iron Works' wind-load configurator. Also in June, the Architectural Technology introduction contained an incorrect Web address for information about classes that the architectural firm of Rafael Viñoly Architects is hosting. The correct Web address is www.rvatr.com.

Find more "After Theory" letters on www.architectural record.com. Send letters to rivy@mcgraw-hill.com.

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Record News

Highlights
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p.28 **Gehry to work on L.A.'s Grand Avenue plan**
p.30 **Russia set for building boom**
p.34 **Holl's Bellevue Arts Museum reopens**

Redesigned Freedom Tower will be sleeker, safer

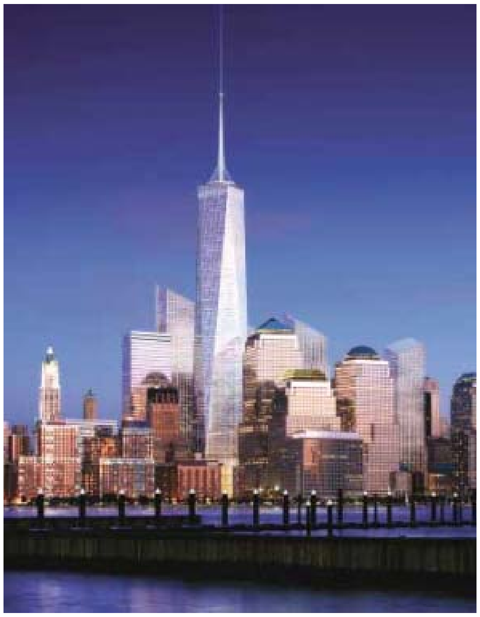
After having about six weeks to rethink its plans, Skidmore, Owings & Merrill on June 29 unveiled a slenderer and safer design of the 1,776-foot-tall World Trade Center Freedom Tower. The tower's original design, the centerpiece of redevelopment at Ground Zero, had been ordered back to the drawing board by New York Governor George Pataki on May 4, after the New York Police Department noted its concern about the building's vulnerability to truck bombs. The new tower, which has a solid base and a centered spire, is much more reminiscent of local landmarks, such as the former Twin Towers and the Empire State Building.

Many of the tower's design changes stem from the need to set the building back from West Street, to its west, to limit vehicular access. The new tower will be set back about 90 feet from that street, 65 feet farther than the original proposed location. To accommodate this setback, the structure will be built on a 200-foot-by-200-foot square footprint, instead of the original plan's parallelogram-shaped base. The tower will no longer twist, but will be chamfered back from its corners, creating eight tall isosceles triangles. Maintaining the original building's torque with a square base would have been awkward, notes SOM spokesperson Elizabeth Kubany. The newly situated building will also be about 20 percent slimmer than the original Freedom Tower, says SOM. Because its amount of office space will remain the same, the thinner tower will have 69 office floors, versus 60 in the original plan.

Above these will sit an observation deck, a restaurant, and a 400-foot spire centered over the building and secured by a system of guy cables. The new spire, still in development, will be created through a collaboration with several engineers and artists. The spire's design, says lead designer David Childs, FAIA, evokes the torch of the Statue of Liberty. Its centering was necessitated for cable support, and due to requirements of the Metropolitan Television Alliance (MTVA). The original tower's planned cage of steel cables and wind turbines has been dropped. While security played the biggest role in such changes, many speculate that aesthetic and monetary concerns were also instrumental. It is unclear how the changes will affect the costs.

Another key security enhancement is the building's new 2.5- to 3-foot-thick concrete base, which will cover 80 feet of lobby space and 120 feet of mechanical and exhaust systems. To enliven and minimize what could be a bunkerlike aesthetic, the base will be sheathed in a gridded pattern of titanium and stainless steel, which Childs says will allow the light to glitter off its surface. Clerestory windows at the base's apex will admit some natural light into the open lobby, notes SOM principal Jeffrey Holmes.

To connect the set-back Freedom Tower with the street, the building will have entrances on all four sides. Tower owners Silverstein Properties have said that new landscaping will be designed by Peter Walker, who is working with Michael Arad on the World Trade Center Memorial. It remains unclear whether nearby Fulton and Vesey Streets will be open to vehicular traffic. Like the original Freedom Tower, the building will contain a concrete core throughout, although that core will now be slightly narrower. Low-iron glass will clad the rest of the building, as in the original scheme, but it will be thicker.



The new Freedom Tower will be set back considerably from the street. It will have a solid base and an obelisklike shape, with a rotated roof.

New York Governor Pataki, who admitted that he had never heard of the word "chamfered" before the redesign process, said that he liked the new Freedom Tower better than the old one, judging it "simpler and yet more elegant." He was joined on stage by World Trade Center master planner Daniel Libeskind, who, despite initial battles with Childs, praised the new design as not only better than the last, but very close to his original vision of a "slender, crystalline tower." Holmes points out that while Libeskind did not work on the new plan, SOM utilized his master plan and design guidelines, which have been further developed. Some critics felt that the new building lacked originality, and that it fit poorly into the original master plan.

The new Freedom Tower design is reminiscent of other New York skyscrapers. The building's massive, centered antenna recalls not only the spires of the Empire State and Chrysler Buildings, but the World Trade Center's original North Tower. Its footprint size will be similar to that of the Twin Towers, while the height of its occupied space—1,362 feet at the observation deck and 1,368 feet at a glass parapet— will equal their heights. Holmes notes that the height match wasn't intentional, but was quickly discovered, and pinpointed, as the height of the tower increased. He notes that the design's other similarities to the Twin Towers and other local landmarks were "not a starting point," but that the firm is very "conscious of the engagement of that history."

Construction on the Freedom Tower is expected to begin in early 2006, with a topping out by 2009. The building is expected to be ready for tenants by 2009. *Sam Lubell*

FREEDOM TOWER
PERFORMING ARTS CENTER
CULTURAL CENTER
WTC MEMORIAL

PHOTOGRAPHY: COURTESY LOWER MANHATTAN DEVELOPMENT CORPORATION/DBOX

Freedom Tower redesign—the critics respond

“Never in my most pessimistic imaginings could I have anticipated what we are now being shown: a beautiful tower rising above a solid concrete base with no windows. We are told that this 20-story bunker will be clad in a “shimmering metal curtain that will give the impression of movement and light.” The operative word in that phrase is “impression.” The first rule of planning for pedestrians is ‘eyes on the street’: windows and doors connecting inside and out. No one will happily walk past a blank wall, no matter how much it shimmers.

This is one of the main tenets of urban design taught to all of the mayors who attend the NEA’s Mayor’s Institute on City Design. It is undisputed. That a proven design failure is being proposed for such a prominent site only confirms how far from reason the security mandate has taken us.” —Jeff Speck, design director, National Endowment for the Arts

“… Somber, oppressive, and clumsily conceived, the project suggests a monument to a society that has turned its back on any notion of cultural openness. It is exactly the kind of nightmare that government officials repeatedly asserted would never happen here: an impregnable tower braced against the outside world.

The new obelisk-shaped tower, which stands on an enormous, 20-story concrete pedestal, evokes a gigantic glass paperweight with a toothpick stuck on top … As an urban object, the tower’s static form and square base finally brush aside the last remnants of [Daniel] Libeskind’s master plan, whose only real strength was the potential tension it created among the site’s structures.”—Nicolai Ourousoff, The New York Times

“The unveiling of a new and fortresslike Freedom Tower for Ground Zero … is the latest and most visible sign that the redevelopment of the former World Trade Center site is slouching toward mediocrity.

Though it has an appealingly simple shape, which comes from the way it slopes back at its corners to what will appear from some angles to be a monumental obelisk, it still doesn’t hold up its end of the skyline conversation with the Empire State and Chrysler Buildings. Their Art Deco spires conspicuously outclass its cable-stayed antenna, which represents a lackluster stab at Buck Rogers dazzle.”—Blair Kamin, Chicago Tribune

Freedom Tower architect David Childs explains his design.

“Buffeted by politics, constrained by cost, shaped by fear, hurry, and the profit motive, the redesign of the Freedom Tower is better than many expected and not nearly good enough. Instead of proclaiming, ‘Here is what we are capable of,’ the new tower mutters, ‘It’s the best we could do, under the circumstances.’

… A building that is eminently practical, deeply rational, and elegant enough, but hardly the muscular symbol [New York Governor Pataki] demanded … This is fundamentally a conventional office building sitting on the most traditional of Manhattan units: a 200-by-200-foot city block.… On any other site, or in any other city, the classical poise and proportions of Freedom Tower 2 would deserve applause.… Childs said he wanted the building to be ‘handsome,’ and it is, especially at the top, where the antenna is housed in a lovely halo of cables.

… Whether [the] lower chunk of the building will look like a squat refrigerator or have a textured, animated surface will depend on details that have yet to be worked out.” —Justin Davidson, Newsday

“The 77-story Freedom Tower has benefited greatly from its most recent redesign. Gone are the Libeskind signature elements: the off-center spire, a clumsy visual echo of the Statue of Liberty, the trapezoidal plan, the crystalline form.… The gimmicky open-air structure at the top of the tower (which was to have housed wind turbines, of all things) is gone, too. What Childs has produced instead is a simple obelisk, an appropriate shape for a building that is, at least in part, a memorial.

The base of Freedom Tower, however, needs a lot of work. At the moment it is a masonry cube tentatively supporting a tall glass shaft. The two parts need to be integrated. By making the shaft more solid and the base more glassy, Freedom Tower could celebrate its impregnability, not hide it.

The [408-foot antenna] is obviously an architectural addition to bring the total height of the building up to 1,776 feet, making it the tallest in the world. There are two famous New York skyscrapers that had masts added to their original designs to increase their height: the Chrysler Building and the Empire State Building. But in both cases, the vertical extension was integrated into the overall design. That is not the case with the Freedom Tower … One hopes that [Childs] is not irrevocably wedded to this concept. His handsome obelisk doesn’t need a spike on its top.” —Witold Rybczynski, Slate Magazine

“It is not a visionary structure. It is a very tall building …

There’s an accepted theory among writers: If you have to explain the metaphor, it doesn’t work. The Freedom Tower is a metaphor not for freedom, but for politics. Its very name is contrived.…

The idea of asking the public what it wanted for Ground Zero was a good one … So what was the point of asking us what we thought if it never mattered at all?” —Alfred P. Doblin, New Jersey Herald News

“If it were just another office building, the redesigned Freedom Tower would be more appealing. Simple and elegant, its steel and glass design almost pin-striped, it would add a touch of class to the Manhattan skyline.

But Ground Zero doesn’t call for an ordinary office building. Maybe some architect somewhere could design a building that would both heal and inspire, that would be as unique as the site itself and convey some of the many emotions associated with it. But the redesigned Freedom Tower isn’t it. It is certainly safe and functional. But, as several critics have said, it is also sterile, mediocre, and uninspired. Whatever flair the first swirling design possessed has been lost to a squarer, more conventional shape.” —Editorial, Bergen Record, *Bergen County, New Jersey*

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New controversies emerge at Ground Zero

As plans move forward at Ground Zero, controversies and questions continue to surface; not a surprise for a project of such magnitude.

Unpatriotic exhibits?

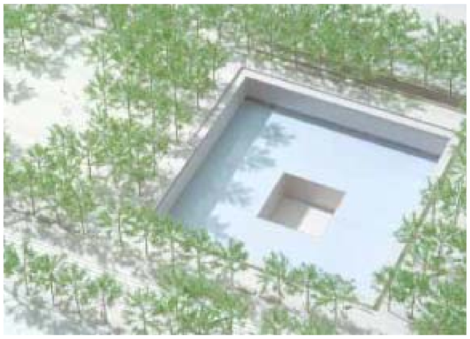
Families of victims of 9/11, already worried that the planned Ground Zero cultural complex might overshadow the World Trade Center (WTC) Memorial, say they fear that its museums might also feature exhibits that they consider insulting. Critics say shows in the International Freedom Center (IFC) may examine "unpatriotic" subjects, such as slavery. They have also targeted The Drawing Center, which has shown controversial 9/11-related art, such as an image combining sex and the Twin Towers, at its SoHo gallery.

New York Governor George Pataki responded on June 25 by saying, "We will not tolerate anything on that site that denigrates America, denigrates New York or freedom, or denigrates the sacrifice or courage that the heroes showed on September 11." That remark brought subsequent protests of censorship.

IFC executive director Tom Bernstein released the statement: "The IFC will never host 'debates' about the 'reasons' for the murder of nearly 3,000 people at the World Trade Center, nor will it be used as a forum for denigrating the country we love." The museums' fate is uncertain.

A conflict of interest?

Bernstein is also a board member of the WTC Memorial Foundation, which is raising money for both the memorial and the cultural complex. Some involved at Ground Zero have privately said this could pose a problem, inferring that Bernstein's influence on the foundation's board could sway resources toward his Freedom Center. Lynn Rasic, a spokesperson for the foundation, denied any conflict. "The board has a clear conflict-of-interest policy that we expect all members to adhere to." She notes that a recent board resolution prioritizes memorial fund-raising over other projects.



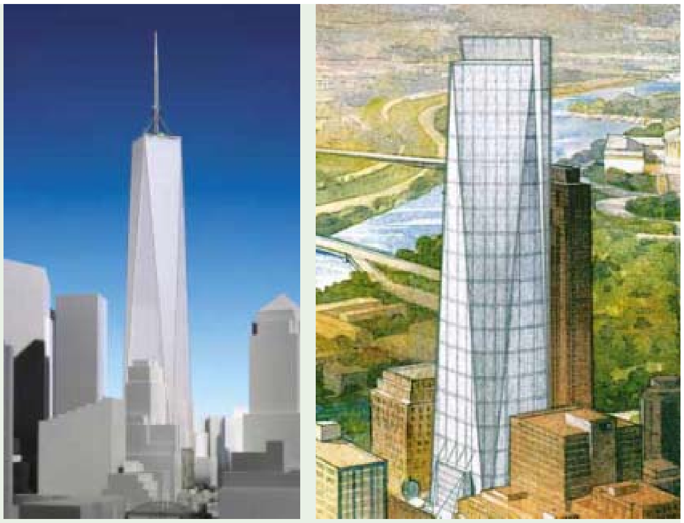
For now, Arad's memorial includes fewer ramps, more trees, and new alignment.

Memorial picked apart?

Parties involved with the WTC Memorial confirm that many of architect Michael Arad, AIA's original plans have changed. Most of the modifications have come from landscape architect Peter Walker and architect of record Max Bond, FAIA. Four ramps descending to the memorial were changed to two last December, because, says Bond, their proximity to streets caused security concerns and circulation problems. The memorial's waterfalls have been aligned with the original Twin Tower footprints, reorienting the underground Memorial Center and changing internal views of the waterfalls. Walker says victims' families requested this change. Current plans call for almost twice as many trees as in the team's original scheme, adds Walker. The Lower Manhattan Development Corporation (LMDC) did not answer requests to speak with Arad.

Design debates seemed inevitable when the LMDC partnered Arad and Handel Architects with two experienced firms, and are certainly not uncommon in a project of this scope. "I think it's important that each of the firms has its sense of things it wants to address," says Bond. Walker says he feels for Arad, confronting the realities of architecture, but notes, "People can't win every battle."

Walker and Bond, not Arad, have long been slated to sign construction documents for the project. But asked whether Arad had the chance to approve the documents, Bond's partner, Carl Krebs, said, "I don't think there's a sign-off process, and it's never been discussed." LMDC spokesperson Joanna Rose says that it is premature to comment on construction documents, but Arad will be an integral part of the review process with the design review committee. *S.L. and Kevin Lerner*



Separated-at-birth department The *New York Post* reported on July 1 that David Childs's Freedom Tower seems to have been heavily influenced by the chamfered shaft of Robert A.M. Stern's initial design (now changed) for his Comcast Tower in Philadelphia. "I'm aware of the resemblance, and I'm surprised and flattered," Stern told the *Post*. *S.L.*

NIST releases World Trade Center report

In June, the National Institute of Standards and Technology (NIST) released its $16 million building and safety investigation of the World Trade Center collapse. The 10,000-page probe, conducted over three years, studied the design and construction of the buildings as well as their performance after the September 11, 2001, attacks. Considered the most extensive of any such report in history, it was funded by Congress under the National Construction Safety Team Act. NIST concluded that the Twin Towers' collapse was caused by the inability of the compromised steel frames, stripped of fireproofing in the attacks, to maintain structural integrity in the attack-caused fires.

NIST's high-rise safety suggestions include improved active fire protection, better adherence of fireproofing, and redundancy in life-safety systems, where warranted. NIST is leaving specifics up to building officials and owners, who should note buildings at higher risk due to iconic status, says Shyam Sunder, NIST's lead investigator. NIST also urges compartmentation—open areas no greater than 12,000 square feet—to discourage fire spread, and "timely" evacuation of buildings during emergencies. The report also suggests continuing education and training for architects, engineers, and fire-protection engineers, in each other's specialties.

Critics worry the suggestions might drive up construction costs without bringing real increases in public-safety benefits. *ENR* magazine

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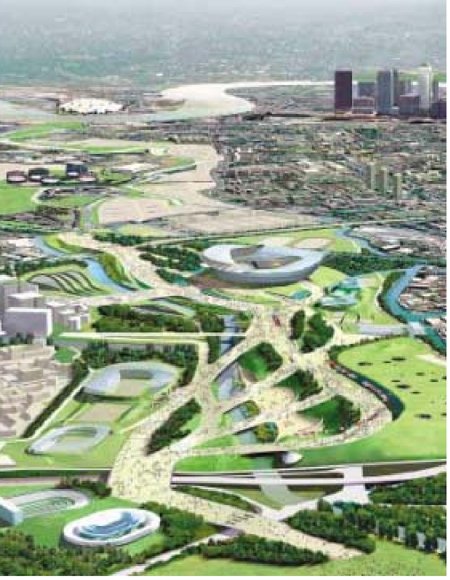
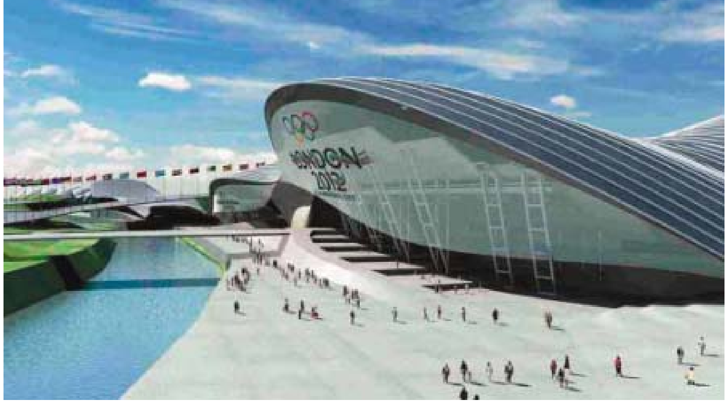
London, chosen for 2012 Summer Olympics, begins lengthy planning process

On July 6, the International Olympic Committee named London the host of the 2012 summer Olympics. The committee gave London 54 votes, while heavily favored Paris got only 50. New York, Madrid, and Moscow were eliminated in earlier rounds of voting. The cities had submitted their bids—which included detailed architectural renderings—at the end of 2004.


Planners envision an Olympic Park in England's Lower Lea Valley.

London's bid was strengthened by an ambitious proposal for a curvaceous aquatic center by Zaha Hadid (which will be implemented) and an Olympic stadium concept, featuring a sleek wraparound roof, by Foreign Office Architects (which may not). Another principal element of the bid was an Olympic master plan led by EDAW, with Foreign Office Architects, Allies and Morrison, HOK Sport, and Fluid. It proposed a 500-acre Olympic Park in the Lower Lea Valley, a poverty-stricken area about 3 miles from London's center, with a networked park structure, a new road network, and cleaned-up waterways. It also mapped out the sites for each venue. Architect Richard Rogers, chief architectural adviser to the mayor of London, feels this plan helped the city win the Olympic bid "because it used the games as a catalyst for improving the life of the city and of the nation."



Zaha Hadid is designing a curving, waterfront-located Aquatic Center.

Specifics plans for the Olympic Park are now moving forward. The cost is estimated at $917 million, with 33 venues planned, eight to be built from scratch, including the 80,000-seat, $450 million Olympic stadium; a $450 million, 12,000-seat velodrome; and a second multisport arena. A number of design competitions for these projects will be announced in October. Zaha Hadid's $117 million, 20,000-seat aquatics center is already set for completion in December 2008. That venue's S-shaped roof was inspired, officials say, by the building's riverside location. An estimated $4.13 billion will be needed to finance all Olympic facilities. Other venues include such famous spots as Hyde Park, Lord's Cricket Ground, and Wimbledon.

After the games, the Olympic Village will be adapted to residential use, and the main stadium will likely be transformed into a 25,000-seat venue.

The Olympic plan is meant not only to regenerate the Lower Lea Valley, but to accommodate London's intense eastward population expansion. A special lottery is expected to raise over half the needed funds. Meanwhile, a new planning authority, the Olympic Development Agency, will soon be introduced to speed up the process, hopefully avoiding the delays that plagued Athens in 2004. Another key issue is security, particularly in the wake of the city's recent terrorist attacks. Jason Prior of EDAW, who is leading the bid team, says the team has already investigated the spatial needs of security-related evacuation plans for the venues and park. *Lucy Bullivant*

Gehry will contribute to L.A.'s Grand Avenue project

The Related Companies of California is in talks with Frank Gehry, FAIA, to build a 35-story "iconic tower" (preliminary model, not by Gehry, far right in photo at right) and surroundings that will anchor the new $1.8 billion, up to 3.6-million-square-foot Grand Avenue housing, retail, and cultural complex in Los Angeles (right). Gehry was the designer of the Walt Disney Concert Hall, which stands across the street from the proposed commercial/residential high-rise, and from a 16-acre park, which will be redesigned.

Bill Witte, president of The Related Companies, which was chosen as the Grand Avenue project's developer last August, says an agreement with Gehry should be signed soon. Keith Mendenhall, manager of public relations for Gehry Partners, says his firm was asked by Los Angeles city representatives not to comment at this time. Construction is targeted to begin in 18 months. The $500 million first phase, which will include the tower and another building—totaling 1.3 million square feet—is expected to be completed in three years. It will be paid for with "virtually all private funding," according to Witte. The Grand Avenue Committee, a public/private partnership representing the city, the county, and various foundations, must approve the design.

Grand Avenue Committee managing director Martha Welborne, FAIA, describes the project as "urban, but not New York or Chicago." Outdoor public spaces will take advantage of local weather, she says. Neighbors include the Cathedral of Our Lady of the Angels, by Rafael Moneo, and the Museum of Contemporary Art, by Arata Isozaki.

Gehry, a longtime Southern California resident, was part of the preliminary master-plan team for the project. "He was sensitive to the placement and fit of the building, so it doesn't overwhelm Disney Hall and fits along the busy civic street," says Witte of Gehry's future tower.

Douglas Gardner, The Related Companies project developer, says he hopes to announce the rest of the design team soon. Los Angeles established the Grand Avenue Authority as a joint-powers authority in 2000 to develop the city's Bunker Hill area. Santa Monica–based Morphosis had been a member of the original team but was dropped several months ago. *J.T. Long*

PHOTOGRAPHY: COURTESY LONDON DEVELOPMENT AGENCY (TOP LEFT); ZAHA HADID ARCHITECTS (TOP RIGHT); THE RELATED COMPANIES (BOTTOM)

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Who needs China? Moscow preparing for next building boom

While the world focuses on Beijing and Shanghai as the new centers of building construction, Russia's capital, Moscow, is undergoing a transformation unmatched since the massive overhaul in the Stalin era. The building boom has overtaken huge swaths of the city; cranes and scaffolding are a common sight, an unavoidable hurdle for visitors and locals. Last year, about 50 million square feet of housing were added. Public officials have spoken of building 38 high-rises of up to 45 stories in the next several years, with 22 more expected by 2015 as part of a program known as the New Ring of Moscow. Sixty "high-rise zones" have been set apart for development.

Van Egeraat's Capital City project.

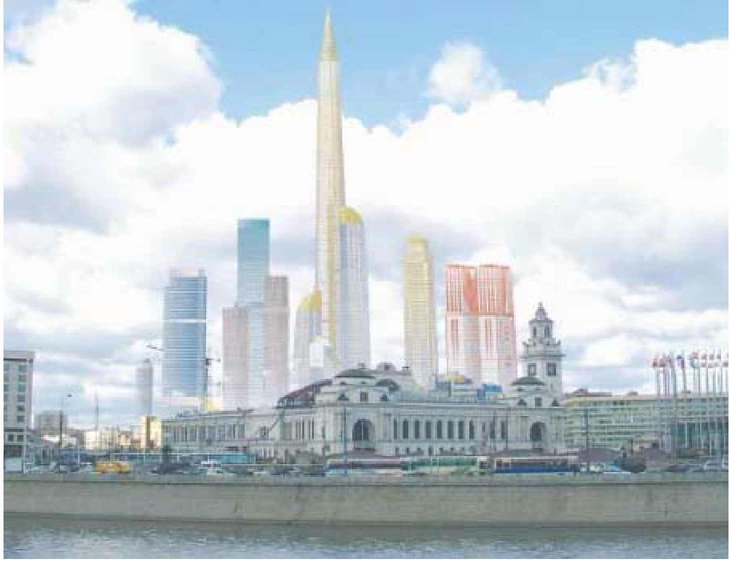
Massive projects under way are fueled both by municipal funding and private investments. One of the driving forces behind the ebullient construction market has been the city administration itself. The reigning economic model in Moscow has been described as "municipal capitalism," characterized by the government's involvement in property management and discreet links with construction companies.

At the top of the list of high-profile projects is the so-called Moscow-City business district, a sector northwest of the city center that has been designated as the future administrative and financial nucleus. It will occupy an area of around 250 acres, 60 of which comprise the zone of construction. The development will add 27 million square feet of mixed-use space. The planned series of towers and modern infrastructure promise an infusion of high-tech energy whose vertical extension will resemble Kuala Lumpur and Shanghai more than a European metropolis. The buildings will stretch along the Moskva River embankment, grouped around an elongated central square.

The steel-and-glass aesthetic of the towers will not break new stylistic ground, but the district planners have formulated an unusually elaborate color conception for the area. It aims to extend the polychromatic character of Moscow and features a set of distinguishing cues. The future building of the city government, for example, will be marked by highlights of red, the presumed color of power, while many towers will end in golden tops, meant to evoke the cupolas of Christian Orthodox churches.

Most of the district's design work has been allocated to foreign firms, including U.S.-based Swanke Hayden Connell Architects, German-based Behnisch, Behnisch & Partner, Netherlands-based Erick van Egeraat Associated Architects, British-based Arup, and German-based Peter Schweger and Sergei Tchoban. The plan has been more than 10 years in the making, and few elements have been completed. But conversations with local planners and city architects suggest that implementation is only a matter of time.

Other high-profile projects are under way. Sergei Tkachenko, the director of Moscow's Institute of City Planning, says he has been working closely with Norman Foster on one of the city's new high-rises. Zaha Hadid has been commissioned to design two residential towers in the city center, while Rem Koolhaas and OMA are working on the redevelopment of four massive housing blocks built in the 1960s on the periphery of Moscow.

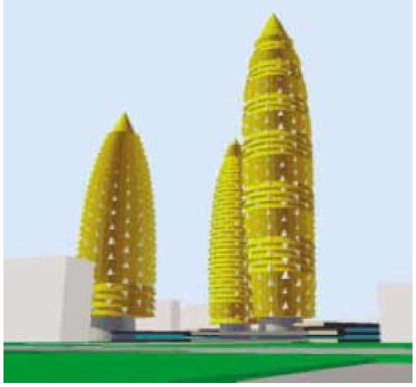


A sketch of the Moscow City district envisions golden-colored towers and red government buildings.

Stefan Behnisch of Behnisch, Behnisch is bullish about the city's prospects. His firm has secured a commission to design a massive transit hub in Moscow-City. The project has temporarily stalled, but he attributes the delays to the inherent complexity of such a vast enterprise. "I would still rather work in Russia than in China," he says. "Once this gold-rush stage ends, a quality-driven process will take over."

Despite the ambitious rhetoric by city officials, skepticism still abounds. Doubters broadly divide into two groups. Aleksei Komech, the director of the State Institute of Art History, believes the towers irreparably wreck the traditional skyline and ruin the visual perspectives across the city. Others believe the high-rise development is likely to exacerbate existing problems. Aleksandr Lebedev, a Russian parliament member and a Moscow mayoral candidate in 2003, said in an interview that Moscow-City cannot possibly meet one of its stated goals of relieving traffic congestion. It is still positioned too close to the center to have an effect, he said. The exorbitant expenses are also a consideration. "Moscow-City has turned into a black financial hole for the city, entailing enormous expenditures, calculated in billions of dollars," says Lebedev.

Unlike the growth of countless cities in China, Moscow's growth is fairly unique for Russia. Only a few oil-boom towns further east are experiencing remotely comparable growth. Officially the city has invested only around $360 million to $370 million in engineering and infrastructure, which it hopes to recoup later through taxes and concessions. The bulk of investment in construction is expected to come from private developers. Moscow has suffered 70 years of misguided Soviet planning, which left a legacy not only of bleak housing projects but also produced a sprawling and muddled urban space. The recent plans envision a polycentric blueprint that establishes a new focus for future growth. *Paul Abelsky*



Cone-shaped high-rises proposed for Chongarsky Boulevard in Moscow.

PHOTOGRAPHY: COURTESY CITY COLOR CENTER (TOP); INSTITUTE OF CITY PLANNING (LEFT AND BOTTOM)

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The Gutter dishes "ill-mannered" scoop

Finally, the architecture community has something juicy to talk about. It's a blog called *The Gutter*, which resides at www.gutter.curbed.com. The site, which began issuing updates about daily events on May 9, takes an ultra-sharp (some would say snarky) point of view. Hence its tagline: "Ill-mannered commentary on the architectural arts."

The anonymous "guttersniper," as the blogger has named him or herself, has covered more happenings (mostly in New York) than most design publications. Recent subjects for ridicule have included *New York Times* architecture critic Nicolai Ourousoff (who the sniper calls "Big Nic"), Daniel Libeskind (the site said his recent Ground Zero editorial in the *Times* "gave hubris a bad name"), Frank Gehry (called a "developer's bitch"), and the New York Mets' stadium plan ("Welcome to Atlanta").

Gutter and its parent, www.curbed.com, a site that focuses on New York real estate and neighborhoods, are published by Gawker Media, which owns trendy sites like political blog wonkette.com, and technology blog gizmodo.com. Gizmodo was the first Gawker site to go live, in May 2002.

Lockhart Steele, publisher of *The Gutter* and *Curbed*, notes *Gutter* has about 4,000 daily visitors. He touts the site's format, which deviates from the "flat" style and "limited coverage" of mainstream media, and "talks about the things everybody is talking about, but everybody is afraid to write," he says. As for those upset about the nasty attacks from, or the anonymity of, the guttersniper, "If people are uncomfortable, don't read the site."

THE GUTTER
NYC2012: Welcome to Atlanta
CURBED

The site skewers the New York Mets' stadium plans.

Steele refuses to name the now-infamous guttersniper, which is itself one of the site's biggest intrigues. Architects and journalists (strangely unified by the site) are wracking their brains in an architectural version of the recently solved Deep Throat mystery. The *Times* even sent out a reporter, in vain, to find him or her, notes Steele. (All of ARCHITECTURAL RECORD's staff have denied involvement.) Steele, who some think is the site's author himself, did drop one hint when he said, "It's rumored that the guttersniper is two people … one is a male and one is a female." Stay tuned. *S.L.*

WMF Watch List includes ancient and modern

Neutra's Cyclorama Center is on the list.

Ancient and modern figure in unprecedented ways on the 2006 World Monuments Fund (WMF) Watch List, announced in June. Every two years, the WMF assembles experts to identify 100 imperiled cultural and architectural sites around the world.

Events in Iraq prompted the inclusion on the list, for the first time, of an entire country. The WMF notes recent damage to Iraq's ancient Ziggurat at Ur and the 9th-century Spiral Minaret at Samarra. Also for the first time, the Watch List includes buildings from the second half of the 20th century. Edward Durell Stone's 1965 Two Columbus Circle in New York City, Richard Neutra's 1963 Cyclorama Center at Gettysburg, Pennsylvania, and Oscar Neimeyer's 1963 International Fairground in Tripoli, Lebanon, are all slated for radical renovation or demolition by the end of 2005. "All three sites," says World Monuments Fund president Bonnie Burnham, "have systematically not been recognized by their owners or the community as significant architectural icons and lack a designation to protect them." The preservation of Postwar Modernism, Burnham notes, is compromised by the influence of "taste rather than some kind of objective standard. Aesthetic issues are very subjective at such a short remove in time."

Other sites include Frank Lloyd Wright's Ennis Brown House in California, Ernest Hemingway's home at Fincá Vigiá, Cuba, Shackleton's Expedition Hut in Antarctica, the Haji Piyada Mosque in Afghanistan, and the 1936 Helsinki-Malmi airport terminal in Finland. *Thomas De Monchaux*

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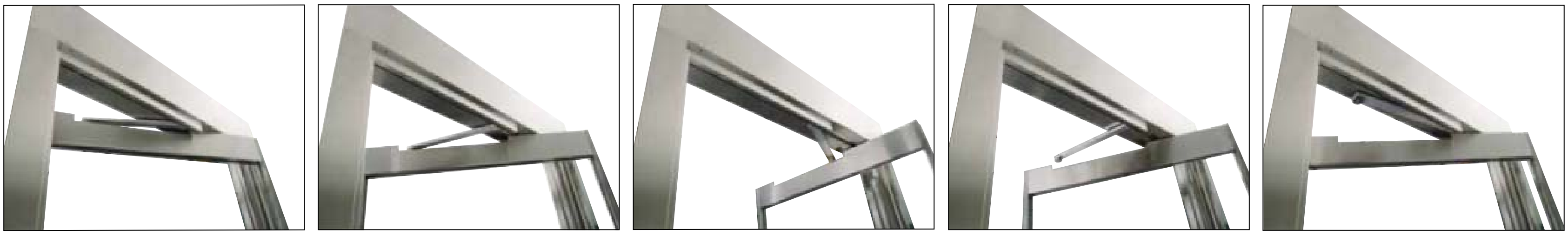

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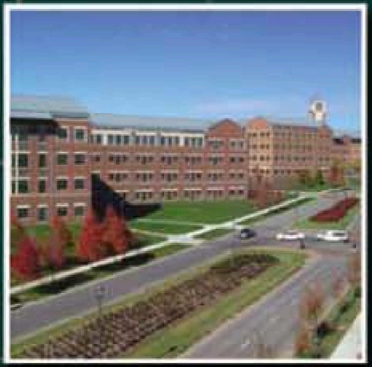
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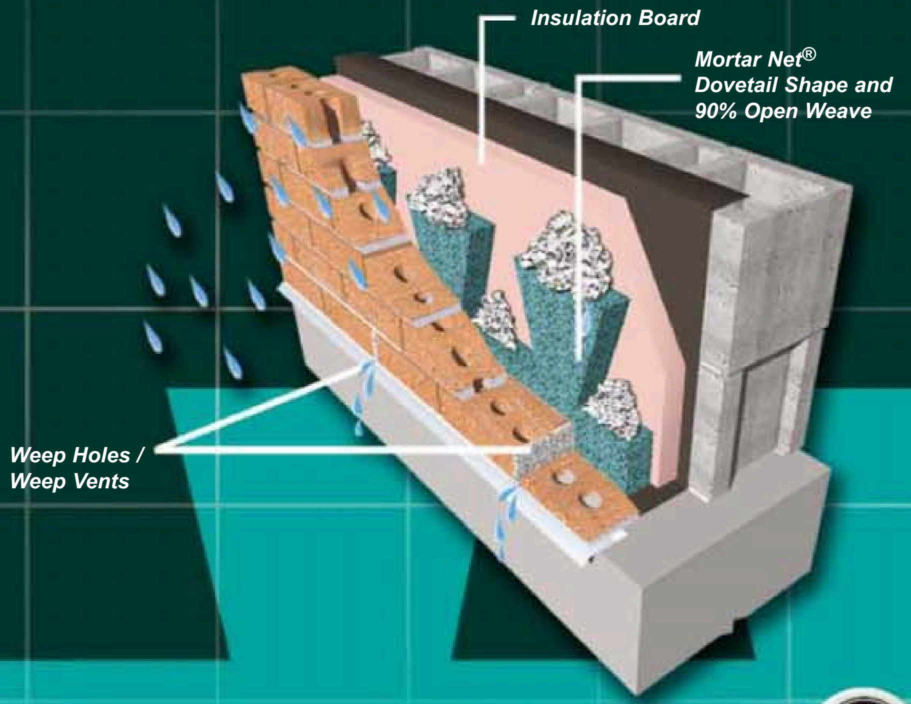

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Bellevue Arts Museum reopens

On June 18, after a 20-month hiatus, the Bellevue Arts Museum (BMA) (formerly Bellevue Art Museum), near Seattle, reopened with a new mission, name, and look. In 2001, the museum moved into its Steven Holl–designed home with the aims of presenting cutting-edge contemporary art and providing extensive arts education. In a culturally conservative suburb of Seattle, BAM chose to curtail its education programs and shift its exhibition focus to craft and design, says new director Michael Monroe.

An $800,000 museum makeover.

Monroe, also an exhibition designer, oversaw an $800,000 remodeling meant to make the building more intimate, more workable for shows, and better attuned to its new mission, "while attempting to continue Holl's vocabulary," he says. To lighten the interior, his team repainted the walls of the main level in paler tones, improved exhibition lighting and spacing, and covered cracking concrete floors with carpeting. A library and arts studio were converted to galleries, and an artist-in-residence studio has become a docent space.

Circulation was improved by a trapezoidal vestibule, arising from a Holl design study, created to serve the top-floor galleries; other changes were largely executed by local firm Scalater Architects.

Holl's office has taken the changes in stride. "BAM is an institution in evolution," says Holl staffer Chris McVoy, "and was designed to withstand changes." *John Pastier*

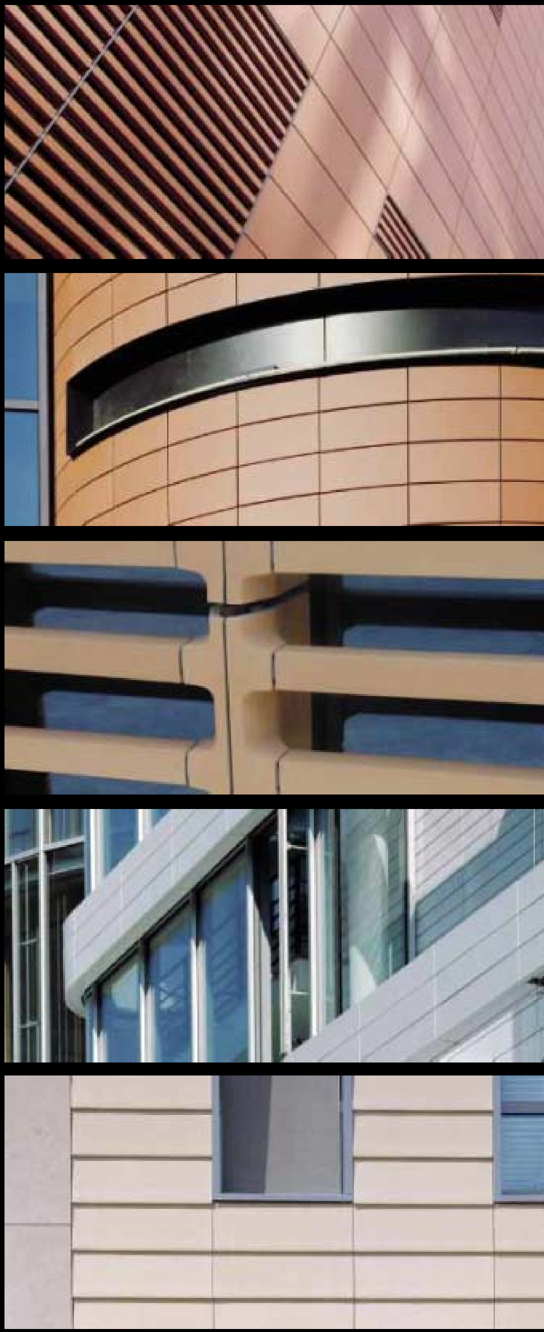
Washington enacts LEED legislation

At press time, Washington was about to become the first state to enact legislation requiring its own buildings to achieve U.S. Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) Silver certification. The rating is the third-highest offered, after Gold and Platinum. Senate Bill 5509, signed by Governor Christine Gregoire on April 8, was set to take effect on July 24. It requires that projects of more than 5,000 square feet receive the Silver rating. The only exceptions are some hospitals, labs, and utility buildings. Washington had already required that all state buildings achieve minimum LEED certification.

Gregoire says she hopes the legislation will encourage "everybody from mall developers to home builders" to use similar building techniques. The Washington legislature's Capitol Budget Committee estimates that statewide operating expenses for government buildings could be lowered by as much as 30 percent if all of them received the Silver rating. Still, Glen Gilbert, president of the Cascadia chapter of the USGBC, says that only 3 or 4 percent of local structures vie for LEED certification. The rest, he says, won't do so "unless it makes good business sense," he says.

Arizona, California, Maryland, and Michigan have issued executive orders to encourage LEED certification, but Washington is the first do so by legislative act. Nevada became the second state to pass legislation requiring minimum LEED-rated government buildings on June 17. ***Brian Libby***

PHOTOGRAPHY: © LARA SWIMMER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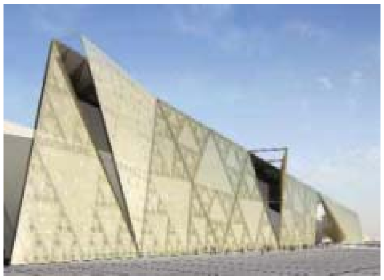
Updated design for new Egyptian Museum

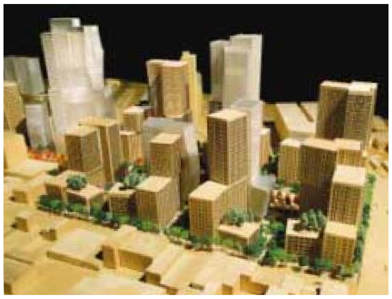
In late June, Egypt's minister of culture unveiled its updated plans for the Grand Egyptian Museum (GEM), which is being designed by Dublin-based Heneghan.Peng Architects. The firm was chosen in 2002 through a competition.

The complex of museums and educational and cultural facilities will be built on the desert plateau beside the Giza pyramids on the outskirts of Cairo. It will replace the current GEM, a monumental structure built in 1902 in the city center, which contains the world's largest collection of Pharaonic artifacts, crammed storeroom fashion into its poorly lit galleries.

The new design, a horizontal structure inlaid with expanses of thin translucent stone, is imbedded into the plateau's gently undulating topography. It provides rare views of the pyramids framed by the desert, instead of by Cairo's urban sprawl. Rather than compete with what may be the longest-standing icons of monumentalism, the architects chose to emphasize understatement.


Heneghan.Peng's newest design.

The 125-acre complex, which will also include open spaces, is expected to be completed by 2009 at a cost of $550 million. Financing will be made available through Egypt's Supreme Council of Antiquities, and via funding from the Japanese government. *Seif El-Rashidi*


A model of the Brooklyn project.

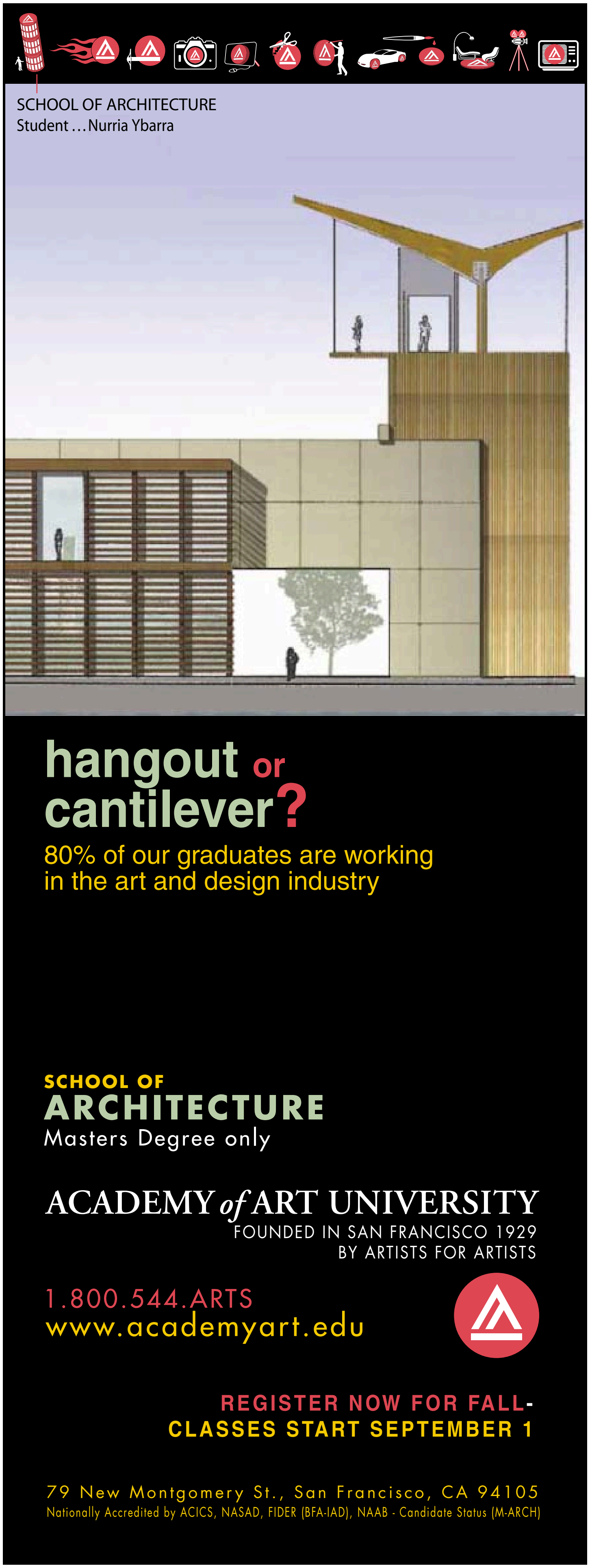
Gehry's Brooklyn plan bigger than first thought

In the excitement surrounding developer Bruce Ratner's proposed Nets Arena [RECORD, January, 2004, page 26] in downtown Brooklyn, less attention was paid to the scheme's other, much more expansive elements.

Frank Gehry, FAIA's updated renderings, revealed in June, show an enormous 21-acre zone of commercial and residential development with a scale that will easily shock, impress, or bewilder. The still-preliminary designs for the $3.5 billion project include the 19,000-seat arena, 12 high-rise residential buildings, 7.4 acres of open space (including gardens, pathways, and an ice-skating rink), and four office towers of 35 to 60 stories. The boxy skyscrapers exhibit Gehry's flair for the twisted and askew, and the tallest among them—the 620-foot "Miss Brooklyn"—would surpass the Williamsburg Savings Bank as the borough's highest building.

Responding to several local groups that bemoaned the project's disruptive effect, Forest City Ratner Companies (FCRC) executive vice president Jim Stuckey, said, "If all you do is replace in kind, you're a net loser." On July 6, FCRC submitted a bid for the MTA-owned portion of the site. A competing team, Extell Development Company, submitted a significantly smaller plan, with no arena. Many locals opposed to the arena back that plan. *Ilan Kayatsky*

PHOTOGRAPHY: COURTESY HENEGHAN.PENG ARCHITECTS (TOP); FOREST CITY RATNER COMPANIES (BOTTOM)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Supreme Court okays government seizure of property through eminent domain

The U.S. Supreme Court has given cities and other local governments the green light to seize individual homes and businesses for private development. The decision essentially extends the scope of the Fifth Amendment, which allows governments to take private property through eminent domain if the land is for "public use."

In a 5-to-4 ruling on June 23, the justices ruled that local officials, not federal judges, were the most knowledgeable to decide whether a community would be best served by a proposed development project. "It is not for the courts to oversee the choice of the boundary line nor to sit in review on the size of a particular project area," Justice John Paul Stevens wrote for the majority, which included Justices Anthony Kennedy, David H. Souter, Ruth Bader Ginsburg, and Stephen G. Breyer.

The decision in *Kelo* et al v. *City of New London* enables several New London, Connecticut, homes to be razed to make way for a riverfront hotel, health club, and office complex. City officials had argued that the private development project would boost economic growth, and that public purpose outweighed homeowners' property rights, even if the area was not blighted.

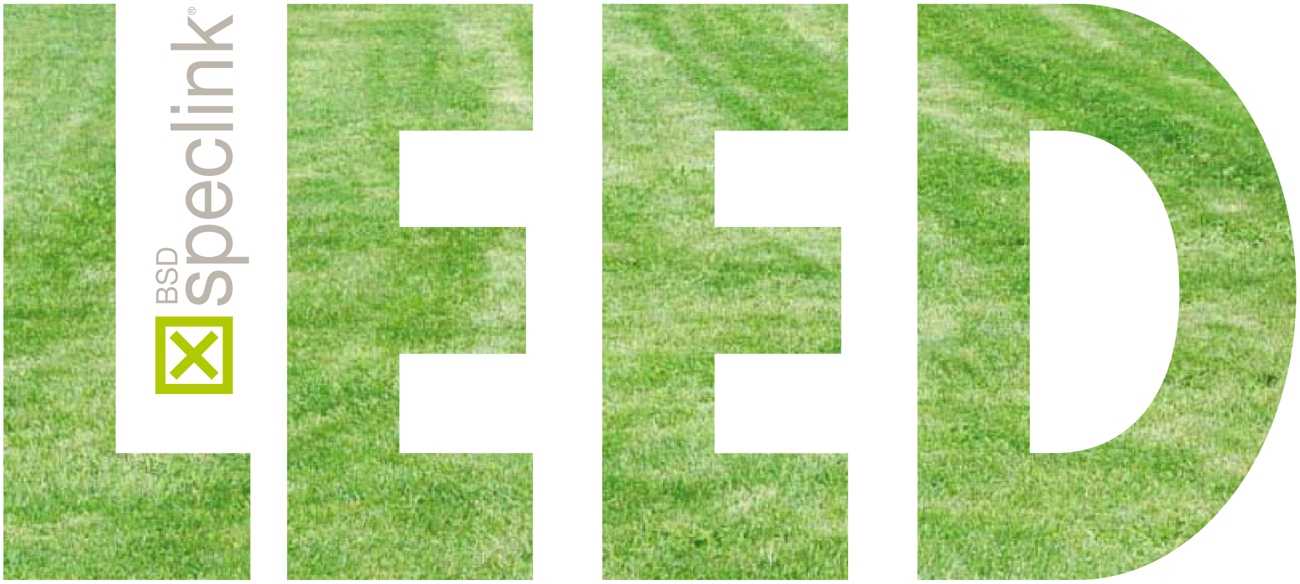
In a dissenting opinion, Justice Sandra Day O'Connor wrote: "Any property may now be taken for the benefit of another private party, but the fallout from this decision will not be random." Beneficiaries from the ruling would likely be "large corporations and development firms," she added. *Sheri Winston,* for *ENR*

SCI-Arc loses fight to buy its home

On June 21, Southern California Institute of Architecture (SCI-Arc) lost its legal battle over who had the right to buy the historic Santa Fe Freight Depot (below) where the school has been housed for five years. A Los Angeles Superior Court judge found that an agreement between SCI-Arc and the building's owner, Dynamic Builders Inc., which SCI-Arc had assumed gave it the right to buy the property, was not binding. The court's ruling allows Dynamic Builders to complete the sale of the building to Los Angeles developer Richard Meruelo. Meruelo is also moving forward on developing three adjoining parcels of land that he owns. One of Meruelo's original proposals for the site had included two large residential towers, but a story in the *Los Angeles Times* quoted him as saying he is not wedded to that idea and wants to build a project that would be "urban, dense, and bold."

SCI-Arc has a 19-year lease on the building and doesn't intend to move, says school director Eric Owen Moss. Moss says that prior to Meruelo's bid for the property, and the subsequent lawsuit, SCI-Arc had produced a conceptual plan for the redevelopment of the area. It's not clear whether any of the institutes' ideas will be implemented in Meruelo's development, but both parties seem to have put hostilities aside long enough to agree to work together on a new plan. ***Allison Milionis***

PHOTOGRAPHY: COURTESY SCI-ARC



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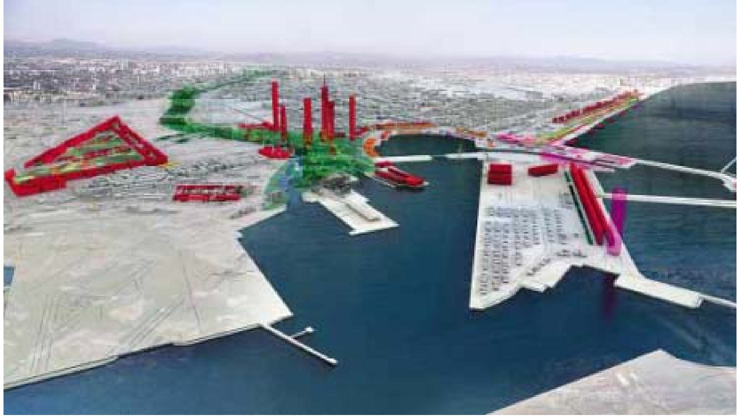

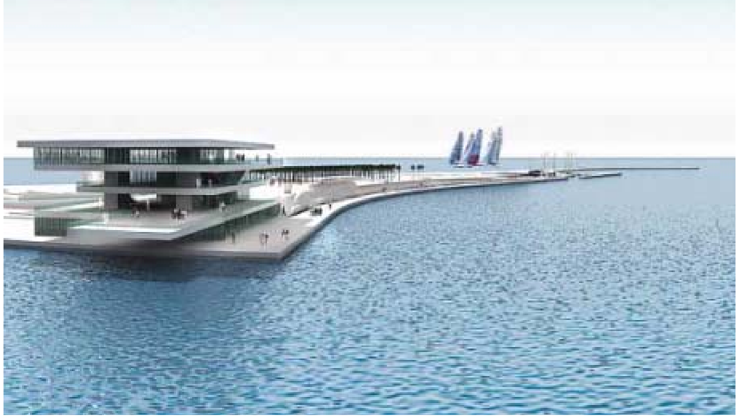

America's Cup spurring major changes in Valencia, Spain

IMAGES: COURTESY ATELIERS JEAN NOUVEL (LEFT); DAVID CHIPPERFIELD ARCHITECTS (RIGHT)

Several waterfront plans are emerging in the Mediterranean port of Valencia, Spain, stemming to some extent from its selection in 2003 as the host of the 2007 America's Cup sailing race. The city's feverish response confirms that the sporting event has become a playing piece in the economic rivalry between the Mediterranean's major ports. Other cities vying for the cup were Marseilles, Naples, and Barcelona.

The Spanish government is backing the city with $1.2 billion for infrastructure improvements related to the event, including port and transportation upgrades. The most recent design plan came this June, when David Chipperfield and Barcelona architect Fermín Vázquez won a competition (sponsored by the federal, state, and local governments) for the America's Cup "foredeck," a viewing stand and clubhouse at the mouth of the city's harbor. Designed as a stack of cantilevered slabs beside a park with waterside grandstands, the building should catalyze the port's transformation for recreational uses.

Prior to this announcement, several other waterside plans—some competing, and all speeded along by the race—were beginning to make their way forward. In November 2004, developer Ignacio Jiménez de Laiglesia presented "Valencia Litoral," prepared by Jean Nouvel and others, that combines dense coastal development, including a cluster of towers up to 60 stories high around the port, with historic and environmental preservation. A few days later, the city presented Santiago Calatrava's addition to his City of the Arts and Sciences, three soaring tubular towers, the tallest at 1,000 feet. The city also announced an urban design competition (which critics called "overreaching and too expensive") to develop the portside area of the Grau, a 90-acre former industrial site near the mouth of the Turia River. One participant, German-based GMP, proposed two 50-story towers facing the port. While no winner has been announced, Mayor Rita Barberá declared that the plans "will convert Valencia into the world's leading city in modern architecture." *David Cohn*

Nouvel's Valencia Litoral plan (left) includes dense coastal development. Chipperfield's "foredock" plan (right) will be a race centerpiece.

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Fuksas designing new French archives

Massimiliano Fuksas (Fiera Milano project, page 92) recently won a competition to design the $147 million State Archives Centre in Pierrefitte-sur-Seine, a suburban town north of Paris. Housing state documents that date back to the French Revolution, the center will accommodate the expanding collection for another three decades. The northern end of the site will allow for additional building work and the future expansion of the warehouse.

Documents will be stored in concrete-walled rooms within a 591-foot-long perforated-steel box. Seven horizontal boxes, containing offices, meeting rooms, and reception, will cantilever out from the west facade, above an outdoor reflecting pool. The cantilevered boxes, facing the neighboring houses to the west, are meant to reduce the visual impact of the 154-foot-high building. The planting of new trees around the center will also help to integrate it into the landscape.

In addition to being a storage facility, the center "has to be a public space," said Fuksas. And while serving as a destination for the architectural tourist, "the building can help the periphery. It is a part of the positive process of development of the [Parisian] suburbs," he said. The completion date is 2009 *Robert Such*

Maki combines Modernism and Islam

Tokyo-based Fumihiko Maki is designing a center for the Aga Khan Development Network called the Delegation of the Ismaili Imamat. The Modernist building in Ottawa, Canada, is influenced by Islamic design. When it is completed in 2007, it will be the first headquarters for the network, which supports educational and research projects at the behest of the Muslim spiritual leader.

The 92,247-square-foot facility is being designed with Moriyama & Teshima Architects of Toronto. It will occupy a prominent site facing Sussex Drive, which is lined by Parliament Hill, the residences of the governor and prime minister; civic and cultural facilities; and several embassies. Conceived as a "pavilion in a park," according to Maki, the rectangular building will "emanate a feeling of openness" but will sit on a granite podium intended to provide a stately presence, and to mitigate the sloping site's grade changes.

Lining the building's perimeter will be residential, institutional, and administrative components, unified by a central covered atrium and an adjacent open courtyard. The courtyard was inspired by the traditional Persian-Islamic *chahr-bagh*, a garden contained within walls and divided into quadrants by intersecting pathways. The glazed atrium's faceted form was inspired by rock crystal, while in contrast to the rectilinear building below, the glass dome capping the atrium creates a distinctive silhouette. *Naomi Pollock, AIA*

PHOTOGRAPHY: COURTESY STATE ARCHIVES OF FRANCE (LEFT); FUMIHIKO MAKI (RIGHT)

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Pavilion planned for Boston's Rose Kennedy Greenway New York–based firm Stephen Yablon Architect has won a competition to design a 2,500-square-foot visitor center on Boston's Rose Kennedy Greenway. The $3 million building will serve as a gateway to the Boston Harbor Islands National Park, and is expected to be one of the first structures to be completed on the greenway, whose land was made available by the dismantling of Boston's Central Artery highway. The pavilion is slated to open in 2007.

A reflecting pool surrounds the pavilion.

Yablon's design is a sheer glass box set on a stone base surrounded by a shallow reflecting pool. It will contain the park's visitor center, a café, and bookstore. Display screens, visible from the interior and exterior, will be embedded in the structure's walls. The greenway comprises a 30-acre crescent that runs from North Station to Chinatown. Its parks are not expected to be completed before 2007. *Ted Smalley Bowen*

Archiprix awards students
Every two years, Archiprix International, an arm of the Dutch-based Archiprix Foundation, gives awards for "the world's best graduation projects." This June, in Glasgow, Scotland, nearly 200 universities from 67 countries participated. An independent panel of jurors selected six winners. One of these, Austria-based Jens Mehlan and Jörg Hugo's Osaka Urban Station proposes to insert an architectural "landscape"—a series of "blobular" pods—into a dense city setting. Other winners hailed from Japan, Finland, Italy, Canada, and Uruguay. *S.L.*

"Osakaurbanstation," an Archiprix winner.

Gehry's American Center in Paris gets new lease on life
In June, French film libraries Cinémathèque Française and Bibliothèque du Film, moved into the renovated former American Center on rue de Bercy in Paris.

Designed by Frank Gehry, the American Center—which once held language, dance, theater, and music courses—closed its doors for lack of funds in 1996. Purchased by the state two years later, the building has had its interior remodeled by Paris-based Atelier de l'île at a cost of $40 million. *Robert Such*

Gehry's American Center in Paris becomes a film library.

ENDNOTES

- The National Endowment for the Arts has launched the Governors' Institute on Community Design, pairing government officials with top planning experts to create development strategies.
- Marilyn Jordan Taylor, FAIA, partner at SOM, has been appointed chairperson of the Washington, D.C.–based Urban Land Institute (ULI). She will be the first architect, and the first woman, to head the research and education institute since it was established in 1936.
- Designer Yves Béhar has been appointed chair of the Industrial Design Program at California College of the Arts.

IMAGES: COURTESY STEPHEN YABLON ARCHITECT (LEFT); ARCHIPRIX INTERNATIONAL (CENTER); © THIERRY ARDOUIN (RIGHT)

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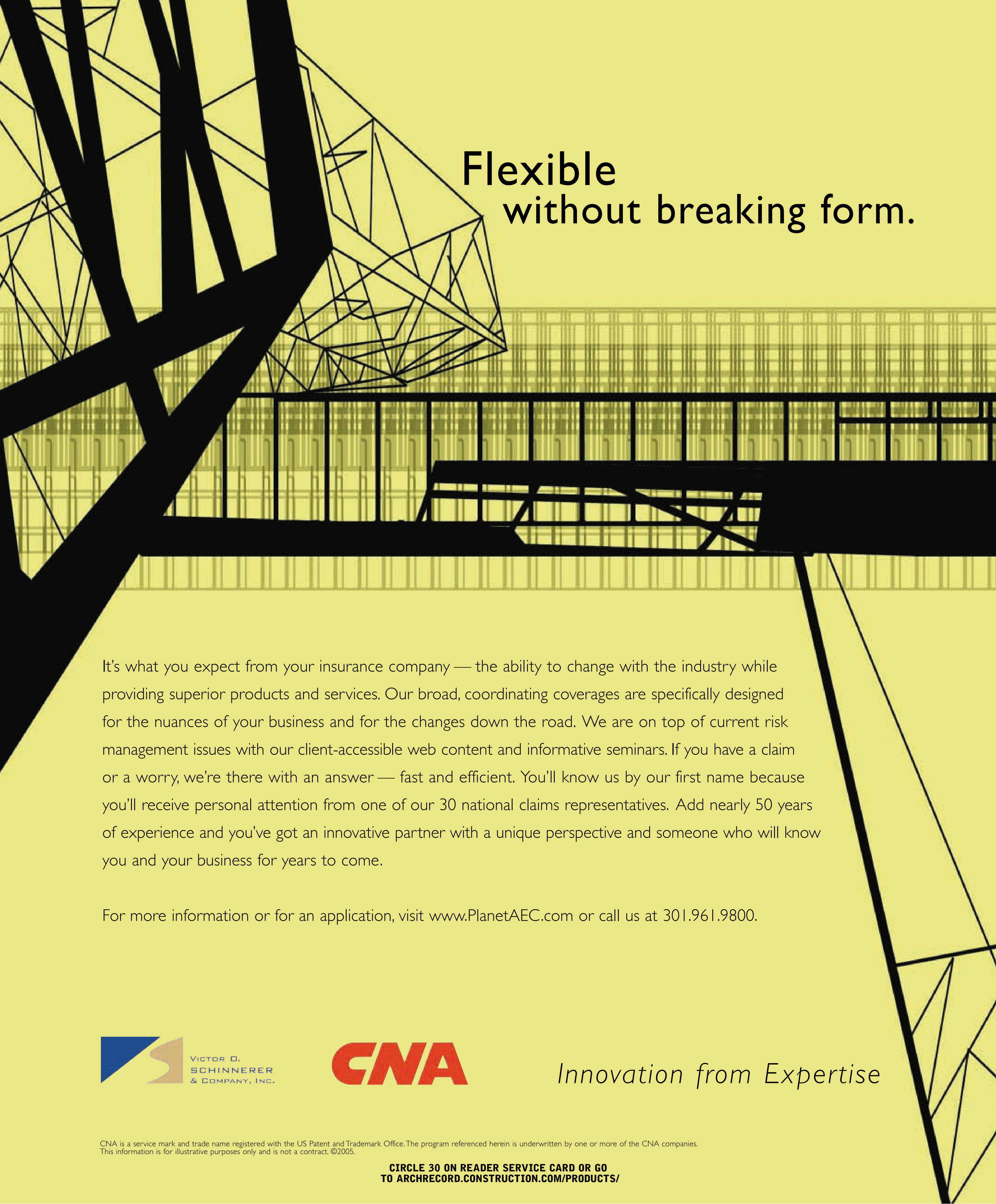

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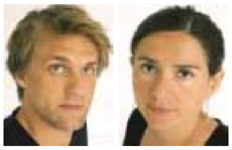
For and about
the emerging architect

archrecord2

archrecord2 chats with several young architects in New York City who are giving much thought to the different elements that create a style, and rethinking the methods required to achieve it. In **Design**, we talk to the partners at Miloby Ideasystem and find out how their vision in small-scale design often leads to large-scale projects. In **Work**, Ben Pell combines the precision of technology and the pliability of leather, and reworks them into an unexpected haute couture.

Design

The Branding of Environment



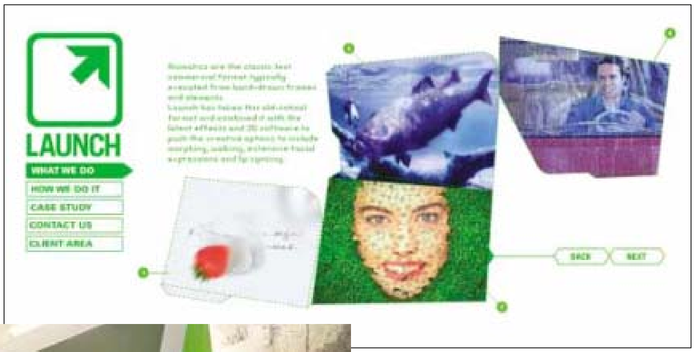
Miloby Ideasystem stands out from its peers both in its approach and its inspirations. The design firm's projects encompass the fields of architecture, corporate branding, product packaging, and Web design. And Miloby's portfolio varies as much as its two founders, Milana Kosovac and Tobias Lundquist.

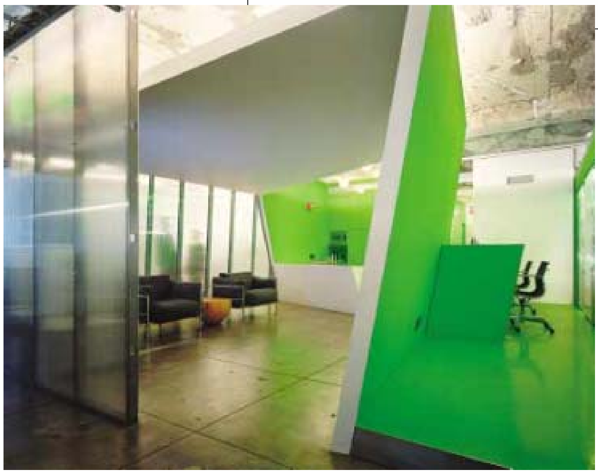
Kosovac grew up in Canada, where she studied both economics and architecture. After brief stints with Dominique Perrault, Michael Rotondi, and Frank Gehry, Kosovac worked on set designs for films and music videos. "Set production was a great opportunity to take my background in architectural theory and model-making and use it in the real world," Kosovac says. Kosovac's next role was as creative director of a company that aided the design and development of new consumer products.

Lundquist, born and raised in Sweden, received his architecture degree from SCI-Arc, in Los Angeles. After working in Daniel Libeskind's office, the architect gained experience at large firms, including SCB in Chicago and SOM in New York. "By working at larger firms, I had the opportunity to apply design to large-scale projects," explains Lundquist.

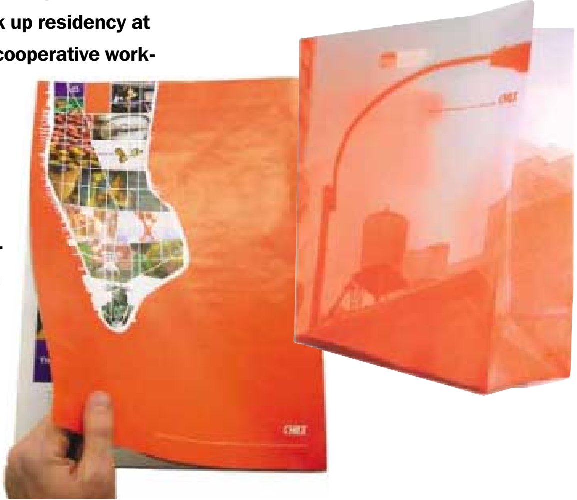
When the partners launched their firm in 2001, they took up residency at the Essex Street Studio [RECORD, January 2004, page 50]—a cooperative workspace for fledgling firms in New York's Lower East Side—and held business hours at night when their day jobs ended. Six months later, however, they found alternate office space and focused completely on Miloby. "It was a sink-or-swim situation," says Kosovac. "Neither of us have jobs in academia, as is often the case at young firms that financially support themselves." The two architects decided to focus their approach on small-scale projects for their clients' businesses.

Kosovac explains, "We're more likely to attract a client through a smaller project, such as creating their business





Launch Studios, New York City, 2005
From the logo to the award-winning Web site design (above) to the funky, unfinished design of the 6,000 square-foot offices (left), the architects seamlessly carry the company's brand across many disciplines.



Charlex, New York City, 2001–present
In the midst of their growth-spurt, this postproduction studio turned to Miloby for an image overhaul. The goal is to increase the design element in their public communications while "painting the town Charlex orange."

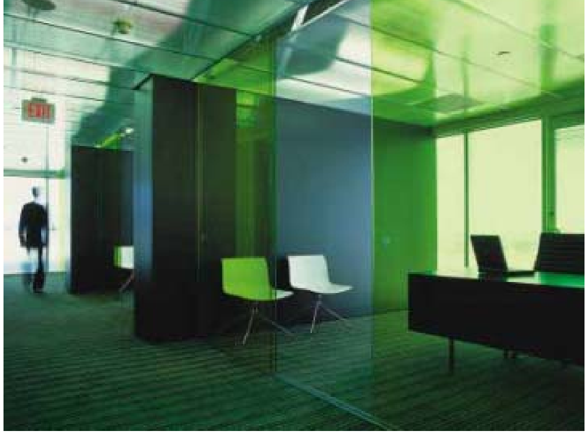
PHOTOGRAPHY: © MICHAEL MORAN (MIDDLE RIGHT);
COURTESY MILOBY IDEASYSTEM (TOP AND BOTTOM RIGHT)

card. By building on that relationship, we ultimately prove ourselves as designers." Both partners agree that their clients have begun to understand the benefit of having Miloby work on all the elements of a company's public face.

In one instance, the firm was hired to develop the branding of a Manhattan-based firm. The team began with creating the logo and soon were commissioned to take charge of essentially all the media, including print ads, the Web site, and promotional gifts. Within the same year, Miloby was asked to design the company's offices. "They recognize the value of our providing them with continuity and a seamless experience that also extends into their built environment," Lundquist adds.

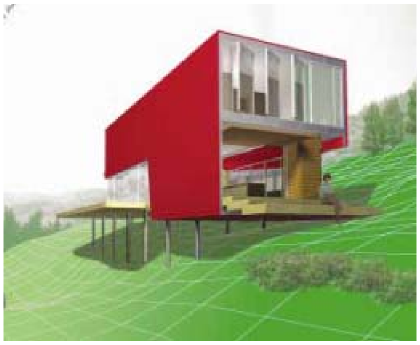
The duo enjoys the mix of the distinct yet connected disciplines. Lundquist says, "While the technical skill set may vary depending on the project, it still comes down to creating good design." They point out that their urban location is partly the reason for this business plan. "There's a limited amount of new architecture that can be built in the city," says Kosovac, "and rather than do something mediocre or have a firm that specializes in redesigning bathrooms, we want everything we do—in both media and architecture—to be high quality." ***Randi Greenberg***

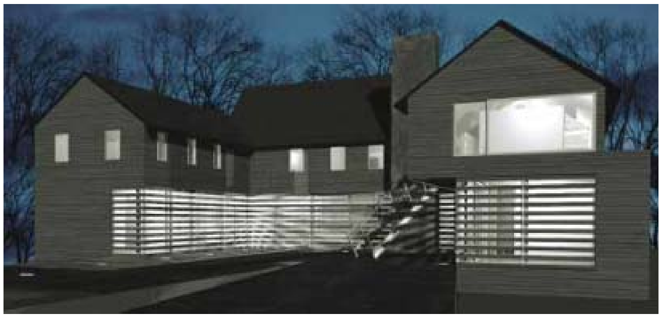
For more examples of the many disciplines of Miloby Ideasystem, go to archrecord.construction.com/archrecord2/



Lucini Italia Company Executive Offices, Miami, Fla., 2004

The design of these offices revolved around the company's flagship product—extra-virgin olive oil. Having worked with the company since its launch, Miloby has also taken part in its branding, advertising, new product design, and trade-show exhibits.



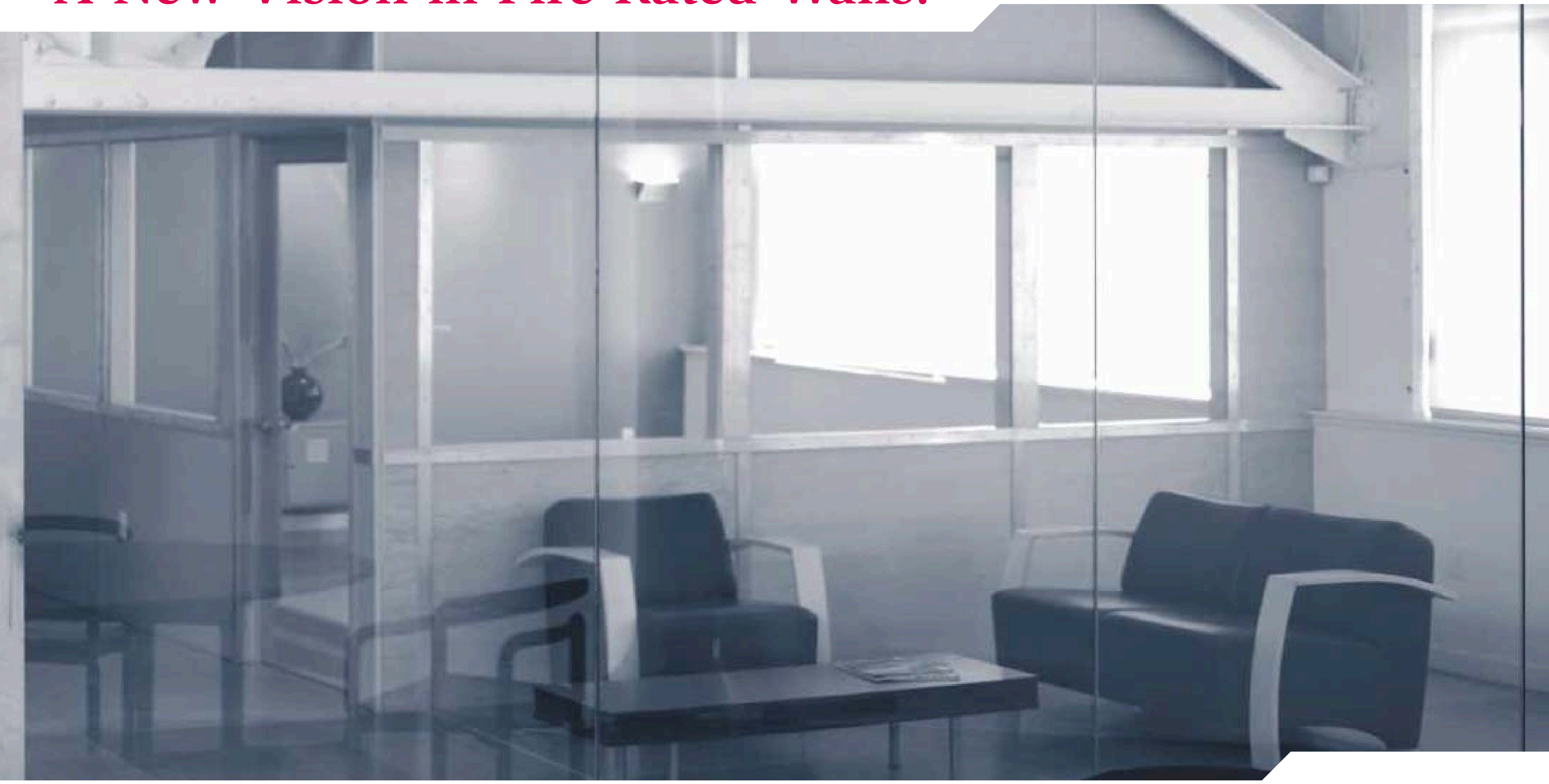


Sante Fe House, Sante Fe, N.Mex., 2001 (left); 28BL, East Hampton, N.Y., 2005 (above)

As with other Miloby commissions, the team's residential architecture stems from the trust and relationship they form with their long-standing clients. The architects design the homes as well as some of the custom furniture created expressly for them.

IMAGE: COURTESY JODY KIVORT (TOP); RENDERINGS: COURTESY MILOBY IDEASYSTEM (BOTTOM TWO)

A New Vision in Fire Rated Walls.



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No More Wire Hangers

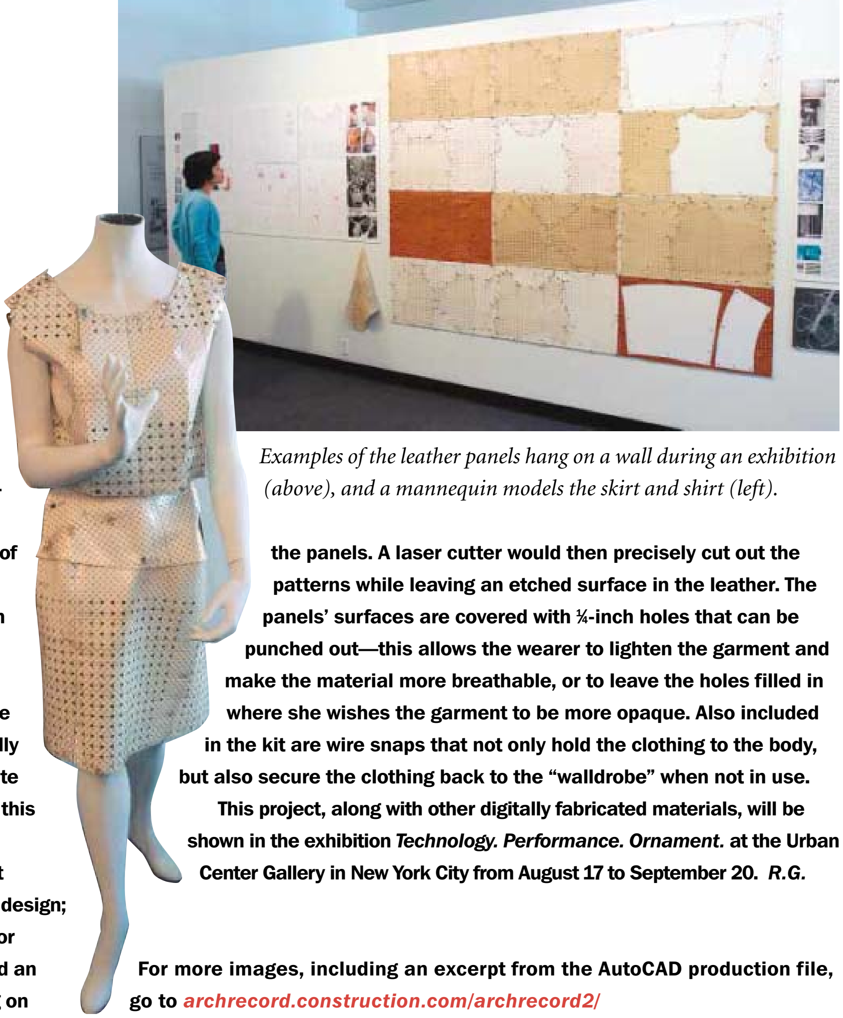
For many people, the process of getting ready in the morning comes to a screeching halt as they stand in front of their closet perusing their wardrobe and trying to figure out what to wear. Ben Pell wants to change that—or at least the setting. Enter Walldrobe/Wearpaper, a clothing system that is tailored by digital fabrication technologies and, when not being worn, hangs on the wall as flat, abstract-patterned wallpaper.

Pell, who at the time was an assistant professor at Syracuse's School of Architecture, along with his graduate assistant, Theo Grothe, began to explore this fashion overhaul as a research project fully funded by the university. "My research involves architectural effect," says Pell. "I'm interested in the ways that architecture, or fashion or design of any sort, engages the environment."

Another of Pell's interests lies in the unaccustomed uses to which new technologies can be applied. In this project, the architect is especially focused on the proliferation of computer-aided design/computer-aided manufacturing (CAD/CAM) in the production of architecture. While architects like Frank Gehry and Greg Lynn use the technology principally to create complex forms, Pell is interested in CAD/CAM's ability to create more practical forms. "I'm also looking at how to use the limitations of this technology as potential and not as a roadblock," Pell explains.

Pell perceived the correlation between CAD/CAM—a program that employs patterning concepts—and the pattern-based craft of clothing design; hence Walldrobe/Wearpaper was born. In the Walldrobe kit (available for women's sizes 6, 8, and 10), one would receive 12 panels of leather and an AutoCAD file that arranges the patterns of selected articles of clothing on the panels. A laser cutter would then precisely cut out the patterns while leaving an etched surface in the leather. The panels' surfaces are covered with ¼-inch holes that can be punched out—this allows the wearer to lighten the garment and make the material more breathable, or to leave the holes filled in where she wishes the garment to be more opaque. Also included in the kit are wire snaps that not only hold the clothing to the body, but also secure the clothing back to the "walldrobe" when not in use.

This project, along with other digitally fabricated materials, will be shown in the exhibition *Technology. Performance. Ornament.* at the Urban Center Gallery in New York City from August 17 to September 20. *R.G.*



Examples of the leather panels hang on a wall during an exhibition (above), and a mannequin models the skirt and shirt (left).

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For more images, including an excerpt from the AutoCAD production file, go to archrecord.construction.com/archrecord2/

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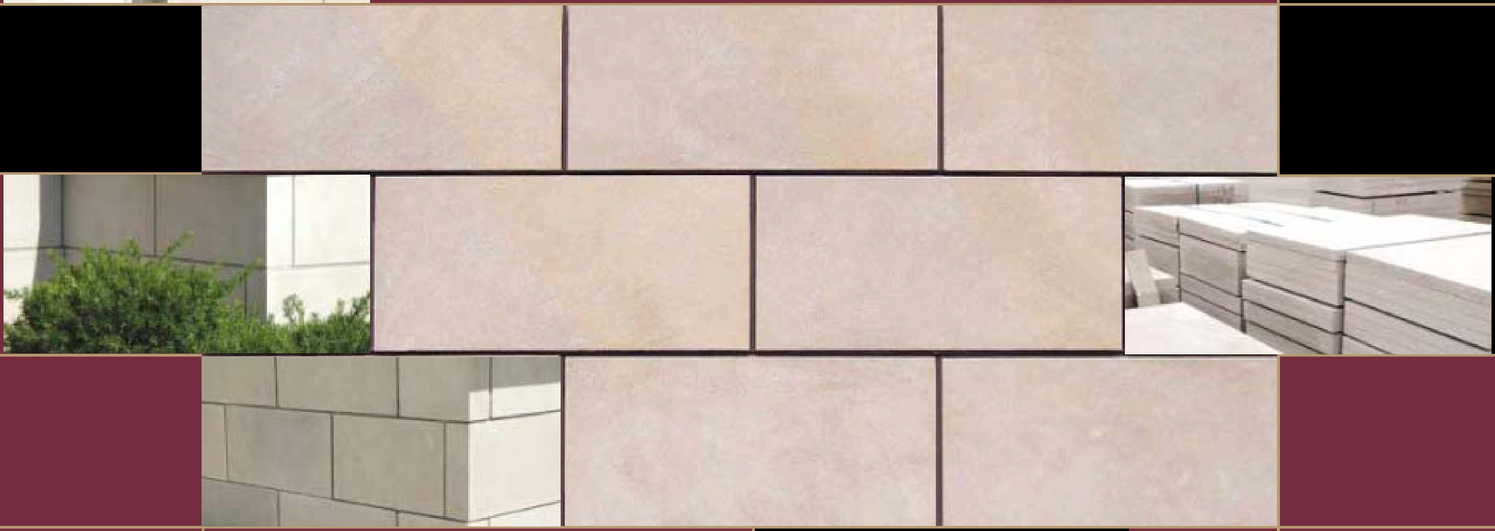

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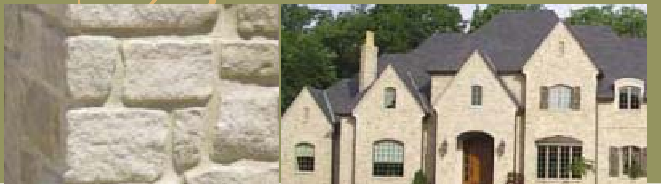

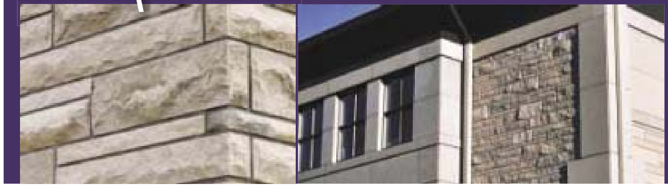

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Finding a dramatic home for a political football

Critique

By Michael Sorkin

After years of promoting a West Side stadium for football and the Olympics, the Bloomberg administration—stung by the defeat of its plan in Albany—quickly regrouped and proposed to build in Flushing Meadows, Queens, piggybacking an Olympic facility on a new Shea Stadium for the Mets. The new site is vastly superior in practically every way: public transportation connections, automobile access, and adjacency to other sporting venues. And, unlike the West Side location, which would have required construction at public expense of a huge platform over an active rail yard, the Queens site is largely parking lots.

Mayor Bloomberg was wistful in giving up the West Side, however, claiming that his tenacity in defense of the site was largely motivated by its spectacular relationship to the Manhattan skyline, visual drama he thought apt for the Olympics. While the location was ridiculous from virtually every other perspective, this idea was not. An honorific gathering place for large-scale public events—such as the Olympics, football, rock concerts, political rallies—does suggest a compelling locale.

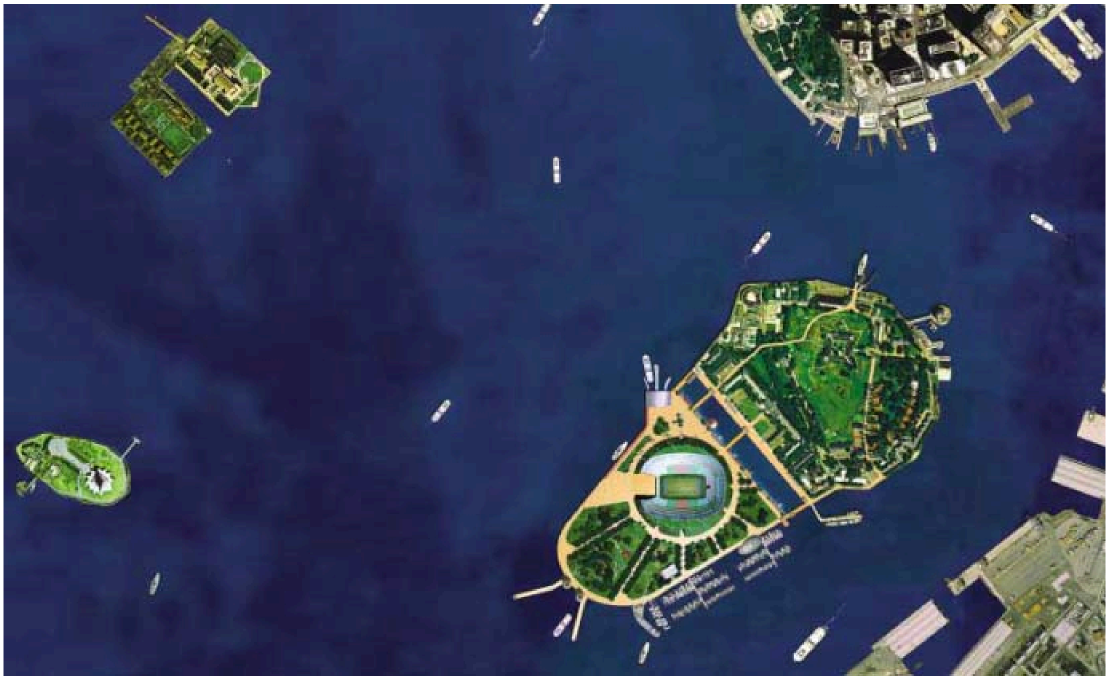
This city offers no site more suited to the task than Governor's Island. Sitting in the middle of the harbor opposite the Lower Manhattan skyline, East River bridges, the Statue of Liberty, and Ellis Island, the former military base (holding, among other things, two spectacular War of 1812–vintage fortresses) awaits a new use and is currently in the midst of a developer-focused Requests-for Expressions-of-Interest process. This narrow, real estate–driven approach is depressing. The city has certain assets of such transcendent value that ideas of use must precede financial strategies to realize them.

A double-island design

After conducting an analysis of 10 alternative sites for the proposed stadium, my studio and I reached a double conclusion: The Flushing site is the most logical from the point of view of existing infrastructure, but Governor's Island is the most spectacular. And so we decided to work on a scheme to see what a harbor stadium there might look like. The first decision was to split the island in two with a new canal. This is not unprecedented. Until the early 20th century, the island was approximately one third its present size. It grew only when contractors dumped fill from the excavation of the IRT subway line. As a result, all of the island's historic architecture lies on its older, northern section, and this would remain in our scheme.

The double-island configuration accommodates a double use, and our proposal calls for the stadium, a public park, and a marina on the southern island, and a United Nations enclave on the northern one, with the conversion of the existing Fort Jay into a "diplomatic arena," a location for intense negotiations over the beating of swords into plowshares. This doubling into an island of free assembly and an island of peace is intended to carry apt symbolic weight. Indeed, given the floundering plans for Ground Zero and the largely commercial program proposed for it, these uses seemed especially meaningful to both time and place.

In analyzing the suitability of the site for large-scale gatherings, the primary issue is that of transportation; the island is currently accessible only by water. In many ways, this is crucial to the compelling character of the place, which stands dramatically apart from the city. A visit takes one to another world of greenery, views, and



The stadium would reside on Governor's Island, with Manhattan to the north and Liberty and Ellis islands to the west.

Contributing editor Michael Sorkin runs the Michael Sorkin Studio and is the director of the urban design program at the City College of New York.

DRAWINGS: COURTESY MICHAEL SORKIN STUDIO

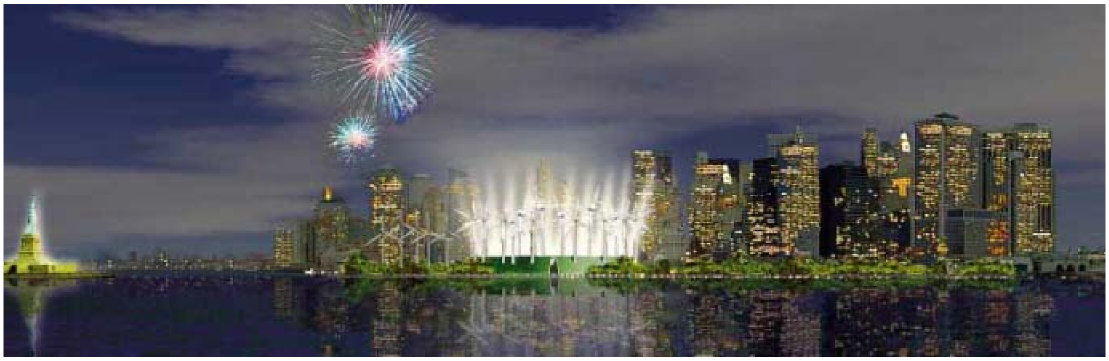
breezes—a purely pedestrian realm. This isolation has an additional useful aspect in assuring the security of the site, an issue that is inescapable for both of the intended uses. For everyday purposes, existing docks and ferry systems are essentially adequate, with only small modifications needed to allow berthing and drop-offs on both islands and to provide dedicated service to U.N. headquarters in Manhattan.

The major traffic generated by games and events—which might attract as many as 70,000 people—would require additional means of access. Primary among these would be the construction of new slips capable of docking the existing Staten Island ferry, which sails across a narrow channel from South Ferry at the southern tip of Manhattan. Deployed as a shuttle on game days (typically on the weekend when the ferry schedule is dramatically reduced), these huge vessels could easily transport the necessary numbers in an hour. This movement might be further assisted by the construction of a pedestrian bridge over Buttermilk Channel to Red Hook in Brooklyn, where parking and bus connections could be provided. And new lots here would logically network with others—in New Jersey, Flushing, Staten Island—and link to Governor's Island via smaller ferries.

Energy independence

The stadium itself would be located within a craterlike earth berm, constructed from the fill re-excavated to form the canal. Covered in greenery, the berm would minimize the impact of such a large piece of architecture in this very visible place, blending it with the parks that would surround it. The dominant visual element would be a large wind farm that would form a stately and kinetic field of objects. Joined with a system of tidal generators in adjacent Buttermilk Channel, these windmills would form a system robust enough to supply all the energy for the two islands. This assertion of complete energy independence is intended not simply to attenuate demands on an overloaded system but to address one of the principal factors in America's international political crisis.

Now that the International Olympic Committee has selected London to host the 2012 games, what better way of priming the pump for New York's 2016 bid than by offering this utterly spectacular site? And the Jets still need a home. ■



The stadium could serve as a bright symbol of free assembly in the same harbor as the Statue of Liberty.

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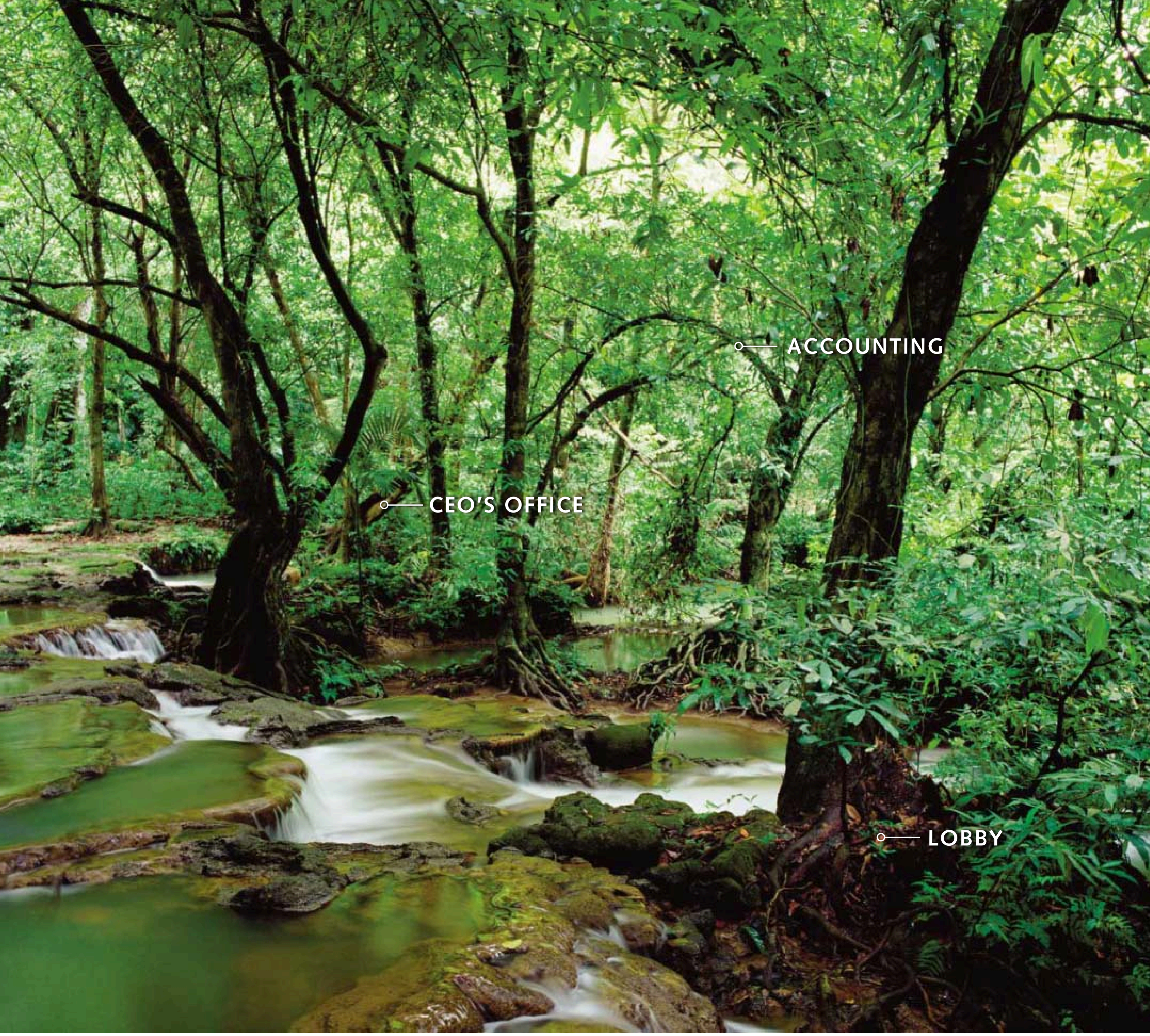

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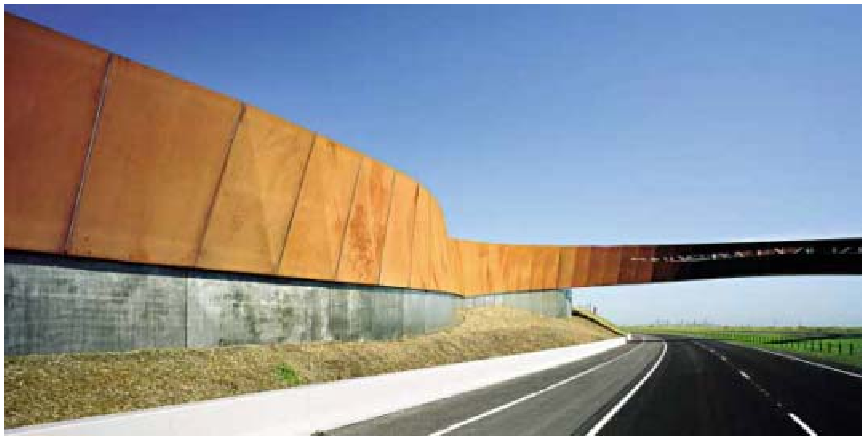
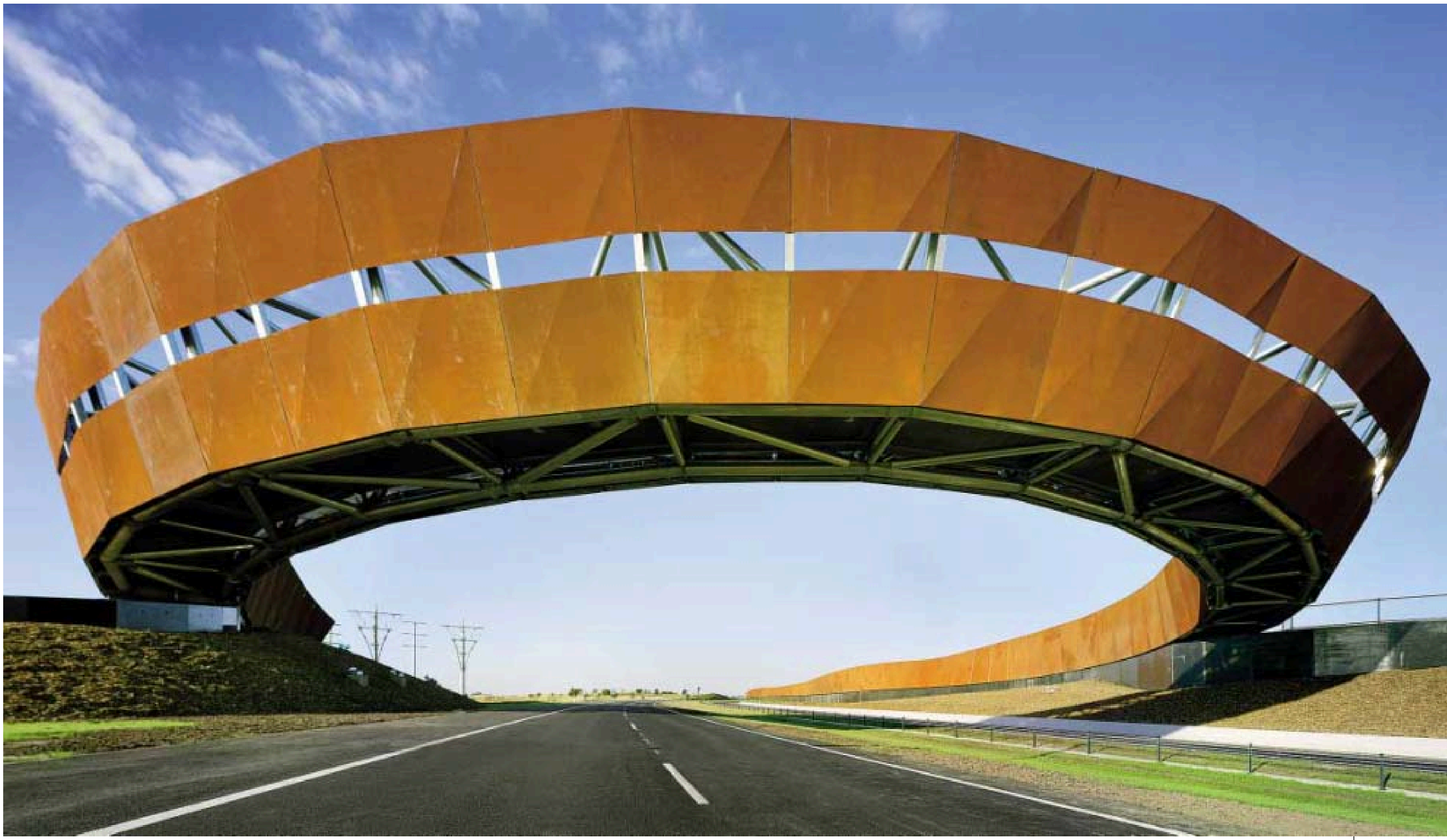
A Cor-Ten-steel sound-attenuation wall (right) sweeps off the ground, morphing into a footbridge (below) that frames the Melbourne skyline.





PHOTOGRAPHY: © JOHN GOLLINGS

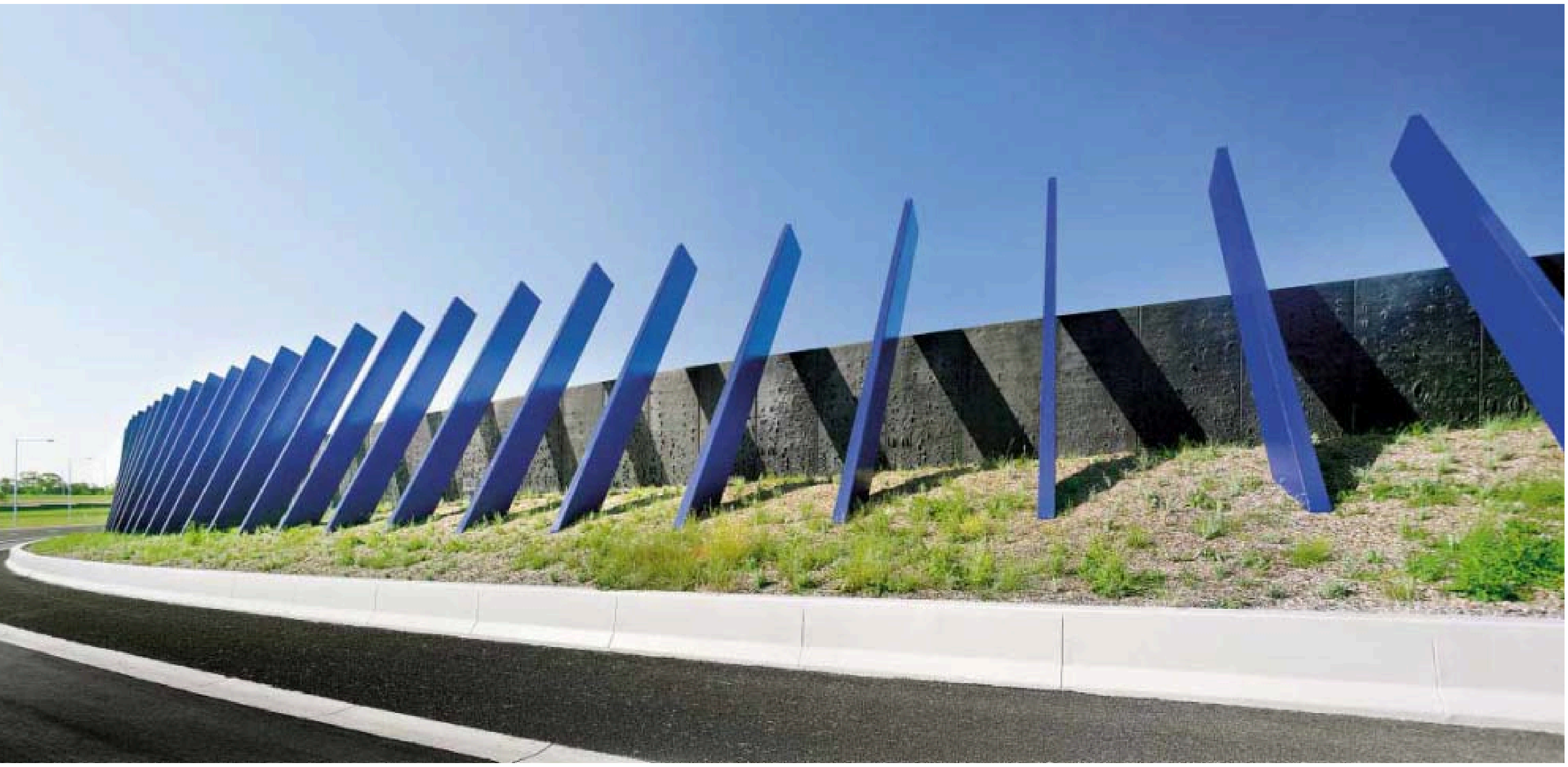
By Beth Broome

A souped-up bypass is a destination in its own right

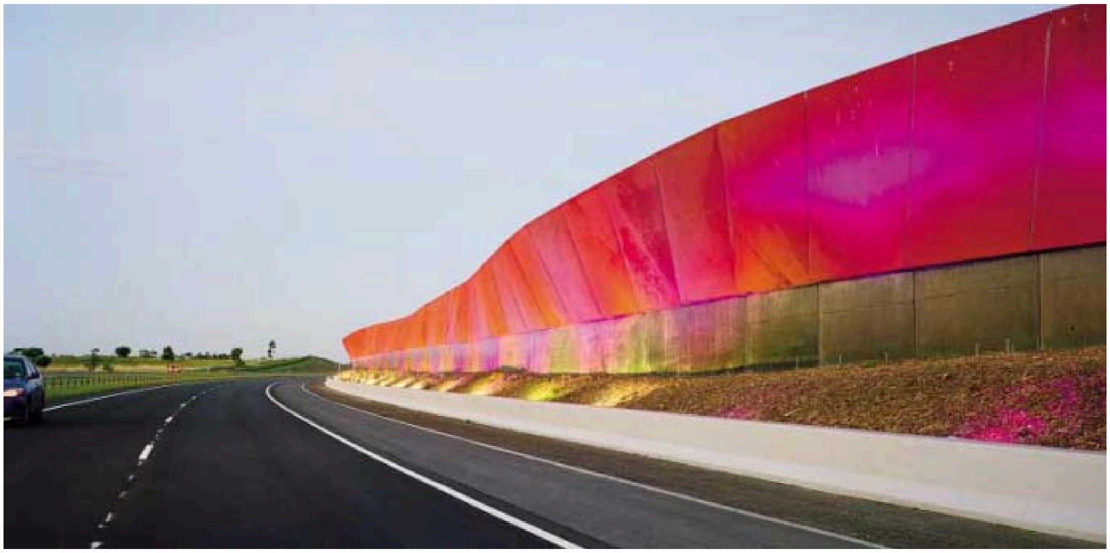
When congestion on the Hume Highway, which runs between Melbourne and Sydney, reached a peak, the Australian federal government, in delivering a new freeway connection, called a competition to design a gateway element with noise-attenuation features. The Craigieburn Bypass, the result of that competition, draws on the suburban vernacular and the transforming power of speed to create a dramatic new entryway for the city of Melbourne.

Named for the suburb it skirts, the bypass was designed by Melbourne-based landscape architects and urban designers Taylor Cullity Lethlean (TCL), in collaboration with Sydney-based architects Tonkin Zulaikha Greer and sculptor Robert Owen. Half the project was completed in 2004, with the remaining section scheduled to open at the end of 2005.

Approaching Melbourne on the bypass, the motorist first encounters a half-mile-long ribbonlike curtain wall made of 18-foot-high Cor-Ten-steel panels cantilevered off a concrete base. Soon, the wall appears to break free of the ground and rises, morphing into a single-span pedestrian bridge that frames the city's skyline. Beyond the bridge, the concrete base continues its path and the wall evolves into an acrylic-paneled scrim, half of which is sandblasted, making it translu-



Torqued louvers rise above an acrylic scrim wall (above) and accentuate the feeling of speed for the passing motorist. The illuminated curtain wall (right) also depicts movement.

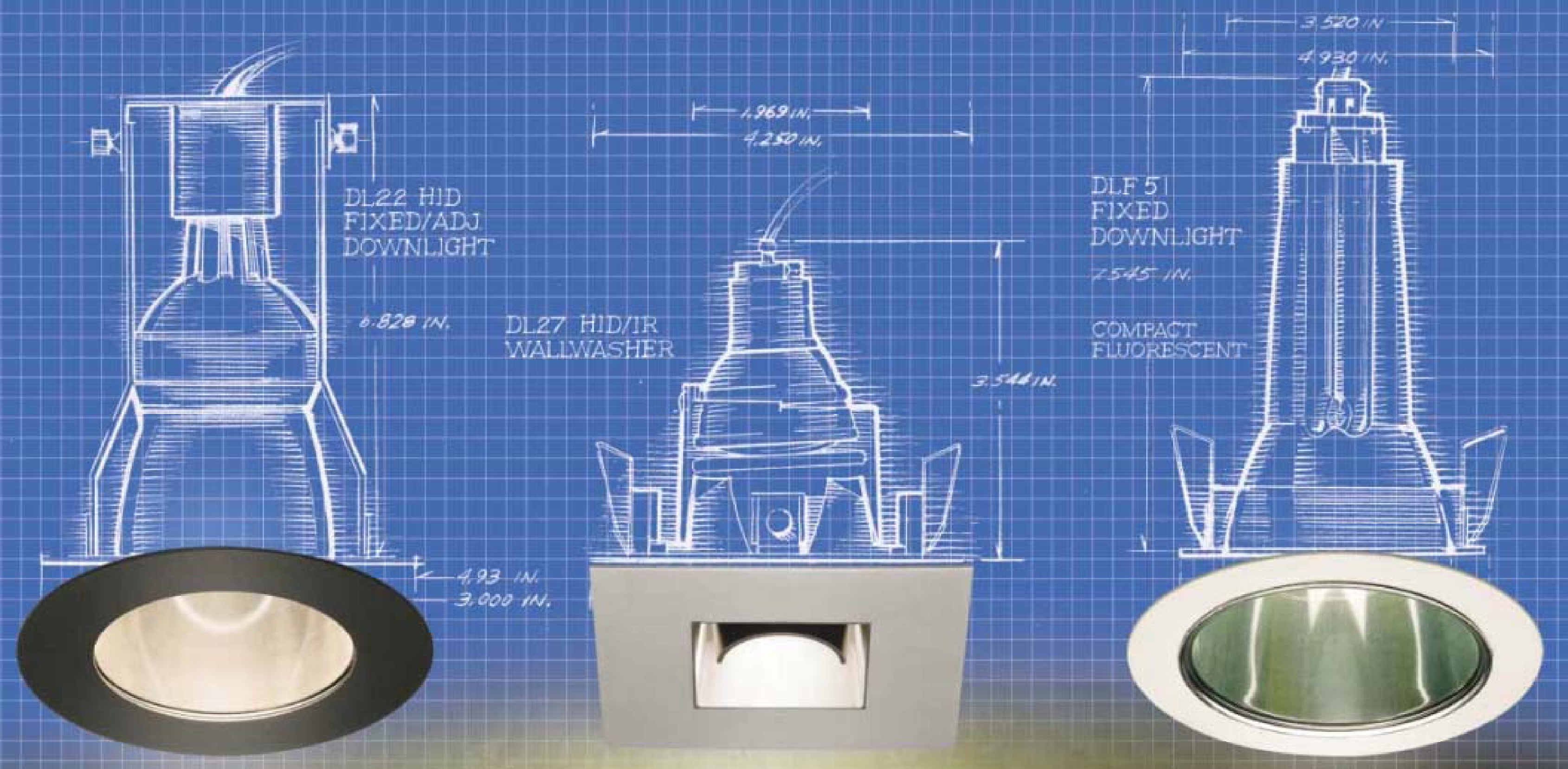


cent. Blue concrete louvers are planted in front of the scrim wall at 13-foot intervals and are rotated in plan 5 degrees.

Mimicking the adjacent homes, where curtains, lace screens, and louvered blinds are visible through the windows, the scrim walls and louvers "were born from the idea of exploring the vernacular materials of the suburb and how a wall design could be a reflection of its environment," says Scott Adams of TCL. Additionally, the design is an exploration of how static objects exhibit dynamism with speed. The angling of the curtain wall and the spacing and rotations of the scrim wall's louvers were carefully calculated to create the illusion of movement for the driver.

The bypass also celebrates its function through its lighting techniques. A section of the scrim wall, which is illuminated by fluorescent lights, harbors LED fittings that form a giant screen. Sensors in the road that react to the flow rate of traffic trigger the screen, causing the wall to become an informed reflection of the road environment at night.

Rather than offering a simple solution to a common problem, the Craigieburn Bypass not only provides a dynamic new approach into Melbourne, but also reveals the design potential of highway infrastructure—one of the essential yet often overlooked features of the built world. ■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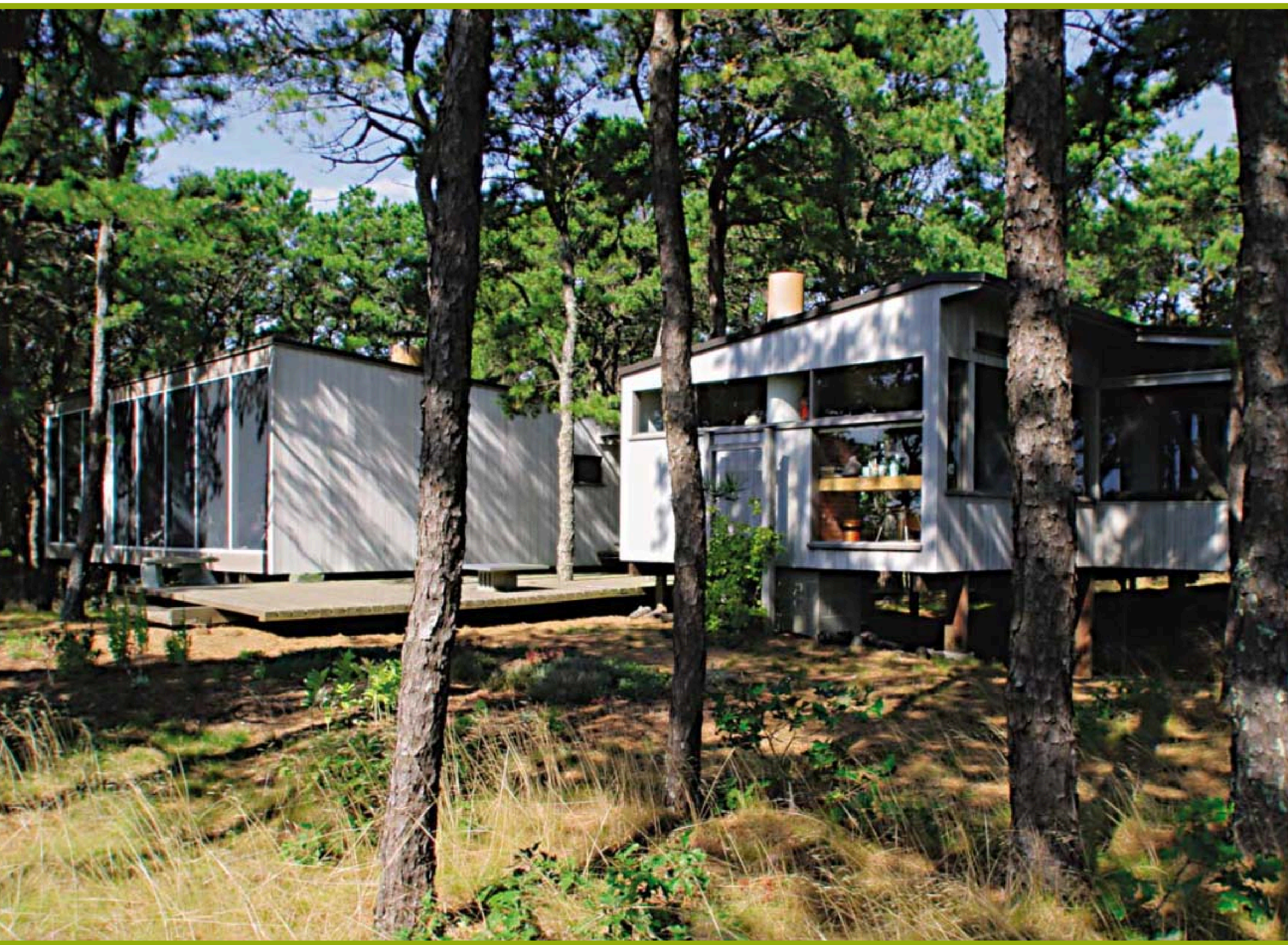
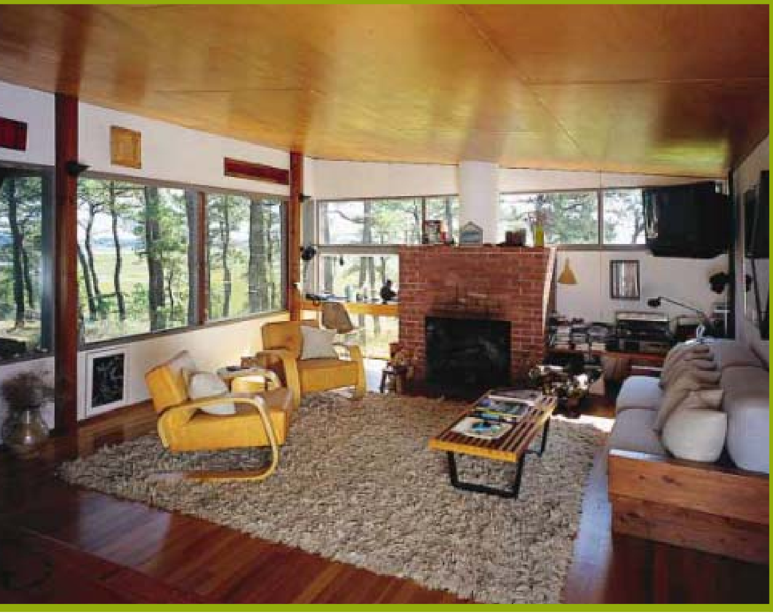
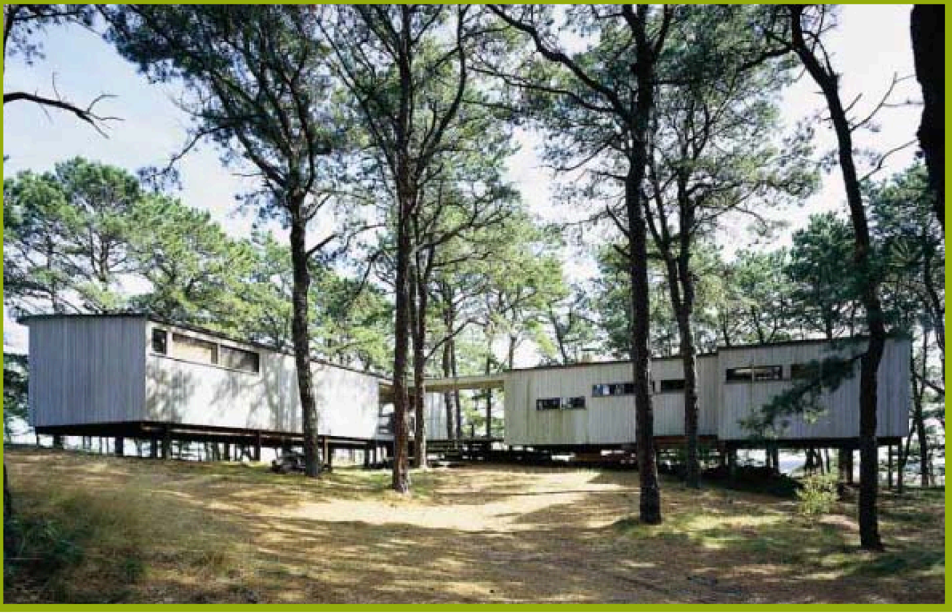






Saving the Early Modernist Cottages of Cape Cod

Photography by Norman McGrath

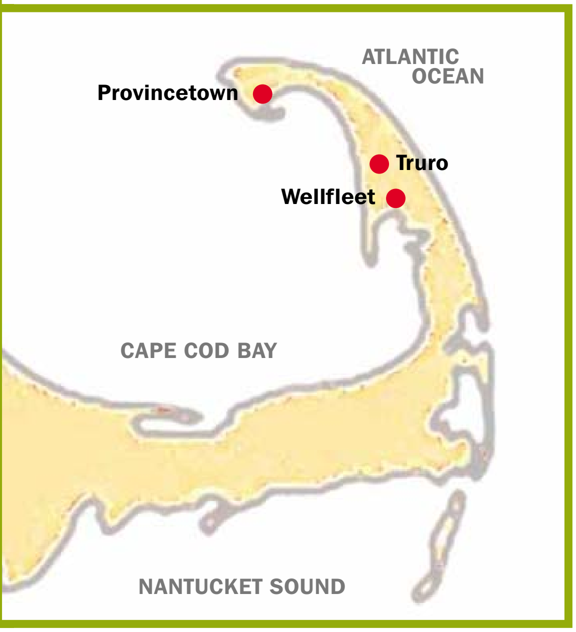
By Mildred F. Schmertz, FAIA

It is not widely known, except among New England's architectural preservationists, that a collection of little Modernist summer houses built of wood lies within the boundaries of the Cape Cod National Seashore. At the end of World War II, on the stretch of land between Truro and Wellfleet on the Outer Cape, leading international architects Marcel Breuer, Serge Chermayeff, and the Boston architects Nathaniel Saltonstall and Oliver Morton began building thoughtful and inventive Modernist houses for themselves and clients. Other good, if less-well-known New England architects began to do the same. There are at least 20 of these houses still extant; more, if the criteria for determining aesthetic and historic importance are not too rigorous. For several reasons, these houses are an endangered species, but they are not without friends, including most importantly the Massachusetts Historic Commission and DOCOMOMO, the international organization dedicated to the study and preservation of the built legacy of the Modern movement.

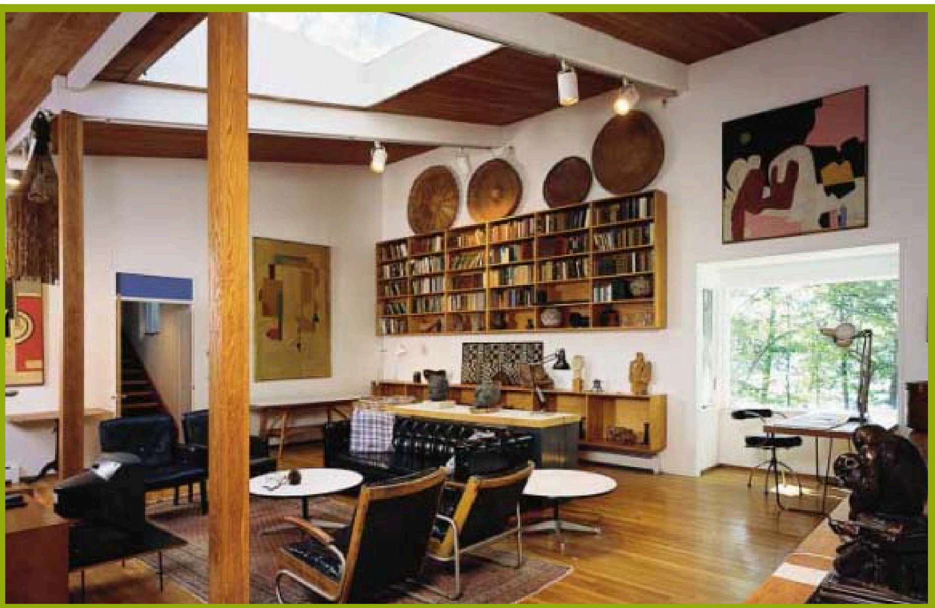
The Cape Cod National Seashore was created by legislation sponsored by President John F. Kennedy and signed into law in August 1961. The Atlantic-facing outer beach, known locally as the "back shore," runs northward an unobstructed 40-miles or so from Chatham all the way to

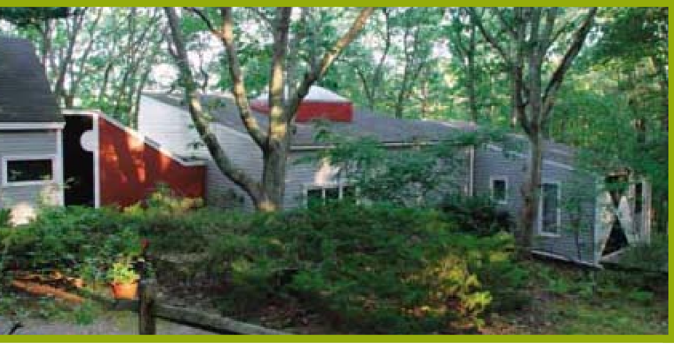
Wise Cottage

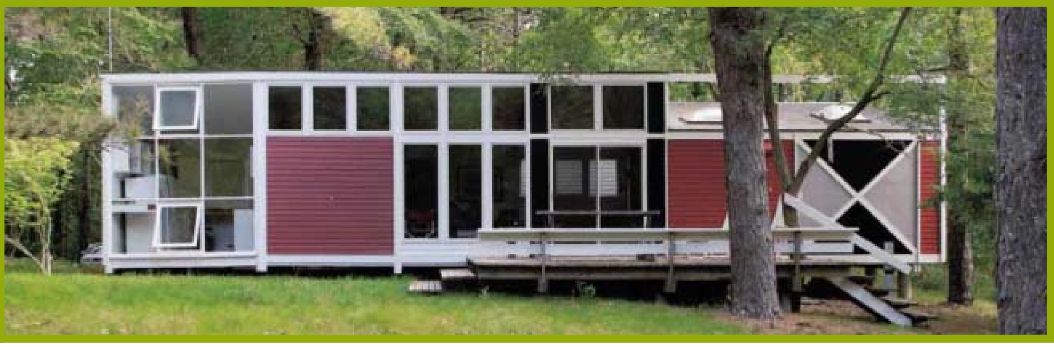
The Wise Cottage is a revised version of Marcel Breuer's first Wellfleet home (1943–48). Low posts support the house, suspending it within its pinewood setting.



Mildred F. Schmertz, FAIA, is a former editor in chief of ARCHITECTURAL RECORD.







Provincetown. Then, heading south, the National Seashore follows Cape Cod Bay. The park owns little on the bay side, with the exception of a portion of Wellfleet. Between Truro and Wellfleet it connects the ocean side to the bay side. The park comprises 27 thousand land acres that include beautiful beaches and back woodland roads and trails that are for the most part open to the public.

September 1959 was the cutoff date for all new construction within what were to become the park boundaries. Up to then, about 600 homes on privately owned land had been built. Those who built between 1959 and 1961 were forced to sell their property to the park. The government offered sellers the option of taking less money in exchange for a 25-year lease; once the lease was up, the property would return to park control.

ALL BUT THREE OF THE 20 HOUSES ARE PRIVATELY OWNED AND AT RISK OF BEING SOLD AS TEARDOWNS.

What makes these 44-year-old public/private environmental and recreational arrangements of interest today is their effect on preservation issues. All but three of the 20-odd houses are privately owned and at risk of being sold as teardowns because of the ever-increasing value of the land they occupy. The exceptions include the Thomas Kuhn Cottage designed by Saltonstall and Morton and the Hatch Cottage by Jack Hall. Both were built after the cutoff and are owned, therefore, by the National Seashore. A former wife of the late Paul Weidlinger, one of the most distinguished structural engineers of his day, donated the third residence to the park.

The preservation story of these three houses is at present one of partial success, and it begins with the efforts of preservationist Gina Coyle with the aid of DOCOMOMO. Coyle's transformation from a year-round house sitter to a leading advocate for the continuous existence of three small Modernist houses on the Outer Cape began when she was asked by Sarah Kuhn to look after her late grandparents' house. Its ownership had outlived the 25-year lease option, but Kuhn continued to occupy the house in the summertime on a yearly lease basis. This arrangement had become more and more untenable because she did not wish to continue to maintain a house that she believed would be torn down once the National Park Service (NPS) laid claim to it. By the time Coyle began to live there, it was in serious disrepair, and it was then that Kuhn chose not to renew the lease and was told to vacate.

Wexler Cottage

"For our compound and the Wexler Cottage (opposite, four)," recalls Serge Chermayeff's son Peter, "my father introduced a new way of using Homasote panels for insulation. Because they could be simply nailed onto a stud wall, it was a light and inexpensive way to build. He used them inside, as well, making a sandwich. He cross braced these walls with X-frames and liked the triangular patterns they made."

Chermayeff Compound

Serge Chermayeff's Wellfleet summer home continues to be used by his sons Ivan and Peter and their families. According to Peter, "It all began with the purchase of a little cottage (opposite, top left) that had a hand pump, a kerosene stove, and a privy." By 1952, Chermayeff had renovated the interior and built a studio and guesthouse (opposite, bottom right). Another addition was later made (opposite, bottom left) that provides a large, skylit living room (opposite, top right).

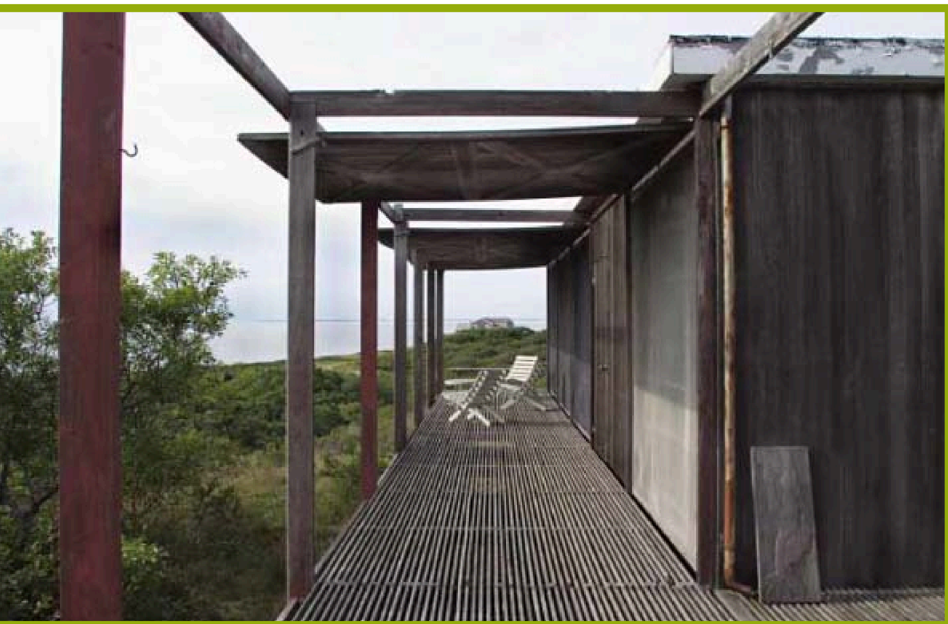
Though it leaked and sagged, Coyle had come to love the house for its economy, simplicity, and carefully studied relationships with the surrounding wooded landscape, so she set out to persuade the NPS, under its ownership, to repair and preserve the house for an appropriate use she had in mind. To further her case, she made a survey of 20 Modernist cottages on the National Seashore and documented them to demonstrate that the Kuhn property was not a singular phenomenon but a very important segment of New England's architectural culture. And she extended her fight to include the Hatch and Weidlinger houses as well.

THE COTTAGES DEMONSTRATE ECONOMY, SIMPLICITY, AND STUDIED RELATIONSHIPS WITH THE LANDSCAPE.

Bill Burke, the National Seashore's historian, admits that in spite of Coyle's efforts, he and his colleagues initially believed the three houses were not historically significant. "But we consulted with the Massachusetts Historical Commission as we are required to do by law before we tear anything down," he says. "The Commission told us that we were wrong; the houses were indeed of historic importance, and they had their reasons." It became the NPS's responsibility to take care of the three houses and, for their protection, keep them occupied.

Today, the Kuhn house has a new rubber-membrane roof and is used in the summer as a residence for graduate students doing scientific work in the park. Ruth Hatch still leases her house from the National Seashore on a yearly basis and will be allowed to live there every summer for as long as she wishes. "When the time comes," explains Burke, "the immediate concern for the Hatch house will be to keep it well maintained and occupied during the summer months. The park is certainly open to the options of an individual lease, or for a nonprofit use of the house." Burke reports, however, that plans for the Weidlinger house are still uncertain, as it has major maintenance needs that the NPS must yet address.

While it is clear that the National Seashore can and will protect the historic houses it owns, the privately owned houses remain endangered. David Fixler, AIA, president of DOCOMOMO US/New England explains: "The problem is what real estate is worth now. Some of these houses were built for $5,000 when the land was worth $500. Multiply all that basically by a factor of one thousand. Let us say a little one-room Modernist cottage sells for $750,000. Anyone who has spent that much money on a house doesn't want it to stay a little one-room cottage, so this is the dilemma we are facing." DOCOMOMO has studied possible strategies, including the creation of historic districts.



Hatch Cottage

This little, flat-roofed house by Jack Hall on the Outer Cape's bay side enjoys magnificent views of the beach, protected from further development by the dictates of the National Seashore. While it has survived over 40 years' worth of coastal storms, today it is much in need of maintenance. The walls, framed in wood and covered by vertical siding, are interrupted by plastic-sheeted window openings. At the end of summer, these openings are shuttered by hinged wooden panels that are lowered from the roof frame.

Unfortunately, as Fixler points out, these houses are not clustered and, in fact, are totally unconnected: "It takes the better part of the day," he notes, "to drive from one to another because of the narrow dirt roads. When you are in any one of these houses there is no immediate physical sense of the presence of others."

Fixler has come to believe that the best guarantee for any kind of preservation is strong local support. It is more important, he claims, than a National Register or a State Register approval. And it helps if the house was designed by an architect of the stature of Breuer or Chermayeff, can honestly be deemed as a truly significant work of mid-20th-century Modernist architecture, and given landmark status on its own. And sometimes a completely unprotected iconic Modernist house can be saved even after it is purchased for a teardown. Fixler cites a house by TAC in Newton, Massachusetts. When the new owners applied for a permit to demolish the house, Fixler relates, the city of Newton sat up and told them they could not do it, used an existing demolition delay ruling to slow them down, and gathered public support to successfully save the house.

SOME PRESERVATIONISTS WARN AGAINST TREATING THE COTTAGES AS STATIC WORKS OF ARCHITECTURE.

Fixler advises preservationists to bring all the ammunition they can. "You may not have an ironclad legal case," he points out, "but sometimes there is just enough local incentive and local pressure so that people realize it is just not in their interest to tear the thing down. But there is no hard-and-fast approach." Fixler believes strongly that Modernist houses should not be treated as static works of architecture, and if you buy one you don't have to correctly restore it as you would an Early American house. He argues that it is essential to convince buyers that it is possible to double the size of a house while making it appear to be what it actually is, a recognizable piece of its original architectural era with contemporary additions. "If you can't do that with these houses, then they are toast," Fixler warns. "Given the land values, people are going to want a house that they can make a little more luxurious. People think we preservationists are saying you must keep an architecturally historic house the way it is. This is a peculiar notion that we must disabuse ourselves of." And the sooner the better if the public is to learn how amenable to enlargement these mid-20th-century Modernist houses can be made to be. ■

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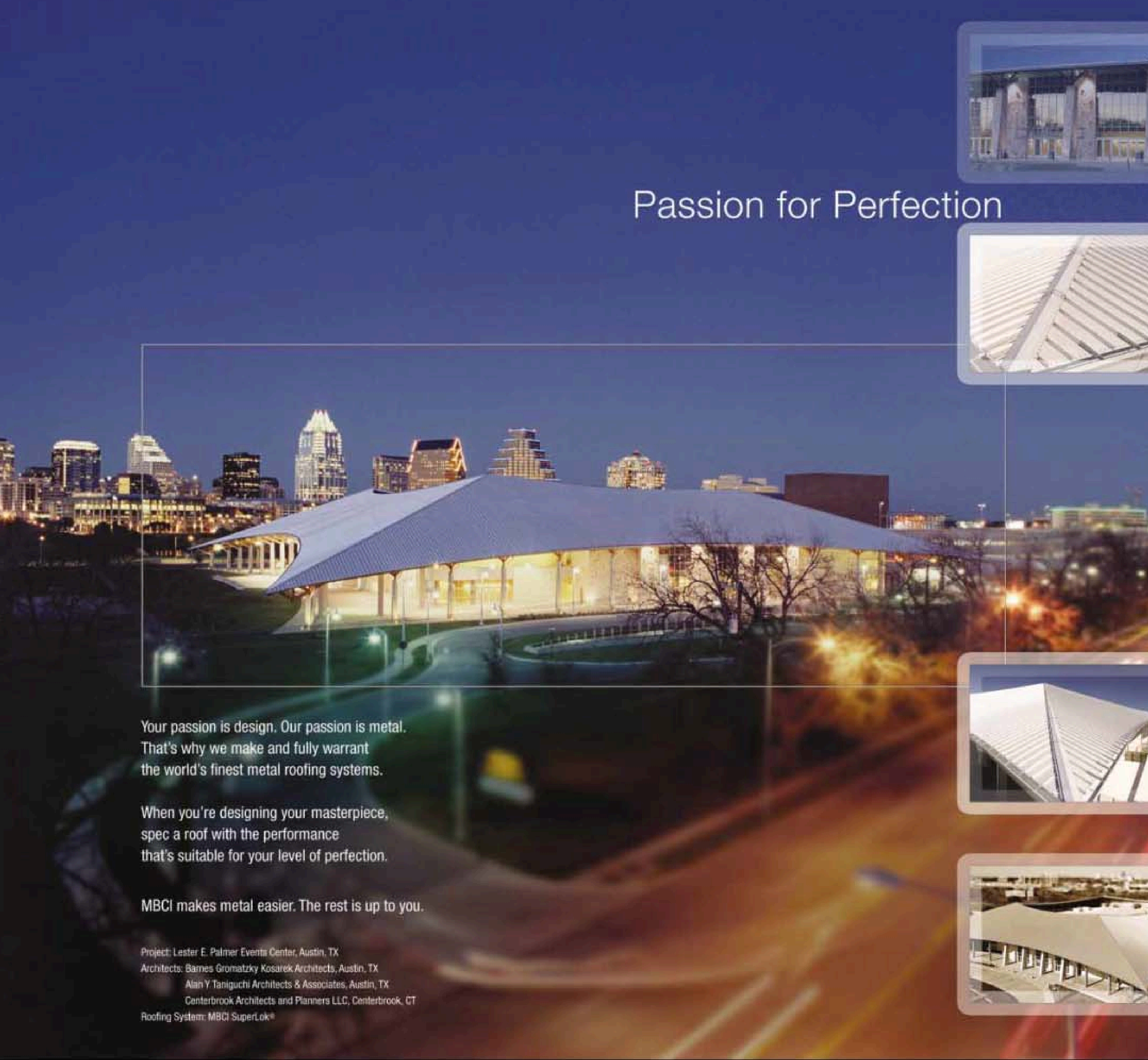

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By Sam Lubell

There it is, looming behind a sea of asphalt, heat waves blurring its behemoth form as if it were a mirage. It is perhaps the most hated form in architecture: the big-box store—the cheap, profit-driven megastructure fabricated with thousands of concrete masonry blocks and little imagination. The building type has been blamed for disfiguring towns across the country and subjecting shoppers to bland, titanic structures with depression-inducing interiors.

Fed-up communities have steadily increased the number of regulations on the big box, and in the past two years their efforts have begun to yield impressive results. Some of the newest stores are surprisingly well designed. Retailers and developers, too, have recently upped their design efforts in response to local backlash, trying to meet customer demand for higher-quality environments and to work their way into new markets such as urban areas, lifestyle centers, and malls. New stores incorporate glass facades, integral landscaping, varied massing, natural lighting, easily navigated interiors, stacked parking, facades that abut the street, and sustainable features like photovoltaic panels. Of course, adopting such ideas on a large scale will not be easy. The stores exist in their form for a reason: They are extremely cost-efficient and convenient to build. Trying to reshape them while pleasing consumers' and companies' bottom lines will no doubt be a challenge almost as gargantuan as the stores themselves.

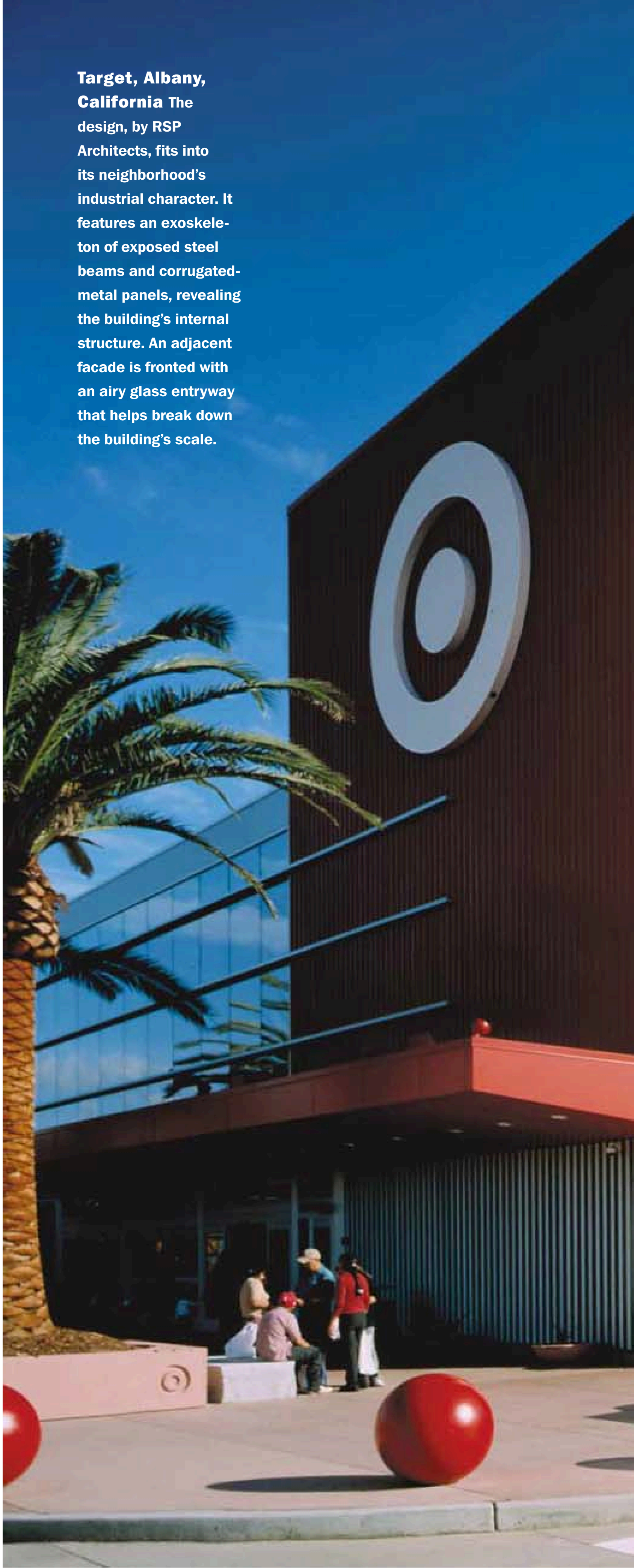
Where we are now

What exactly is a big-box store? The International Council of Shopping Centers' (ICSC) *Dictionary of Shopping Center Terms* loosely defines it as "a single-use store, typically between 10,000 to 100,000 square feet or more." The building type has permeated every corner of our society. According to Dodge Analytics, one third of all retail construction in the U.S.—99.5 million square feet—is concentrated among big-box stores Wal-Mart, Target, Home Depot, Kohl's, and Lowe's. Wal-Mart, the largest big-box retailer, has more than 4,800 locations worldwide, according to the ICSC—a number that grows by almost one a day—while more than 270 million people shopped there last year alone, the company says. Target, which says it has about 1,400 stores, recently announced plans to open 600 new locations in the next five years.

The business strategy that helps companies keep product prices low and stock share prices high generally values practicality and profitability over design. While consultants are paid well to formulate ideal product placements and drive purchasing, architects are paid little, if they're hired at all. Big boxes' gigantic sizes (which continue to increase on the whole, with many stores and "superstores" reaching well over 200,000 square feet) help minimize building costs per square foot. Aesthetic enhancements and customization are seen as unnecessary. Blank walls, single-story asphalt parking lots, metal-halide lighting, and single-level stores save money. But such insensitive design, turning its back on its environment, is dead from an urban standpoint, while inside "you never hear someone say 'it made me feel good to be there,' " notes Matthew Moore, an architect at New York–based ESI Design, which has worked with several big-box stores.

Communities force change

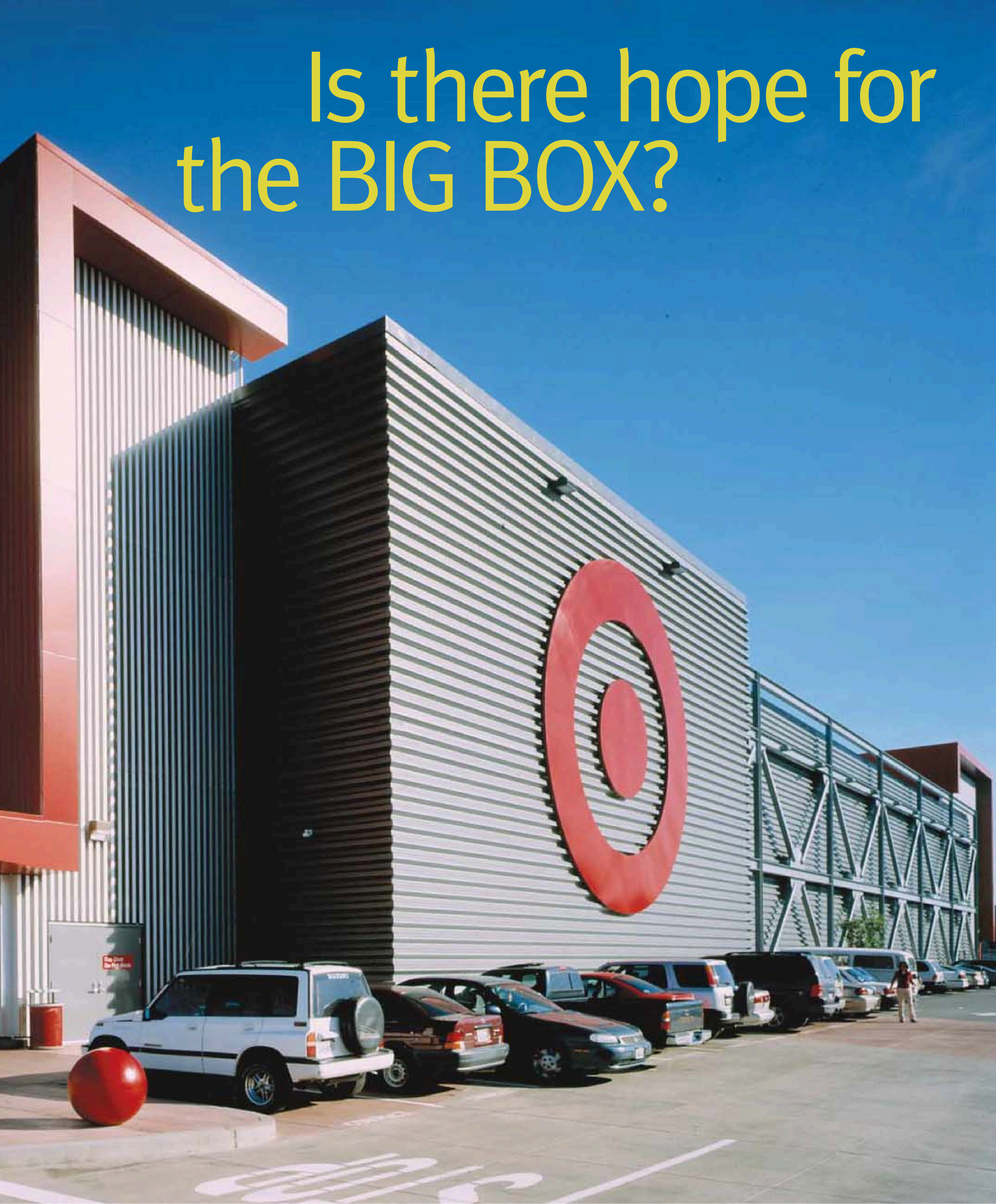
Of course, design isn't the primary reason that big boxes get a bad rap in the public eye. It's their social harm, such as driving out smaller businesses and degrading local environments (with storm-water runoff, greenfield consumption, and wasted energy). But tired of the hideous big boxes in their towns, many communities have begun reviewing designs or imposing zoning regulations to stop, modify, or restrict stores' sizes. Cities like Santa Fe, New Mexico; Austin, Texas; Flagstaff, Arizona; and Brattleboro,

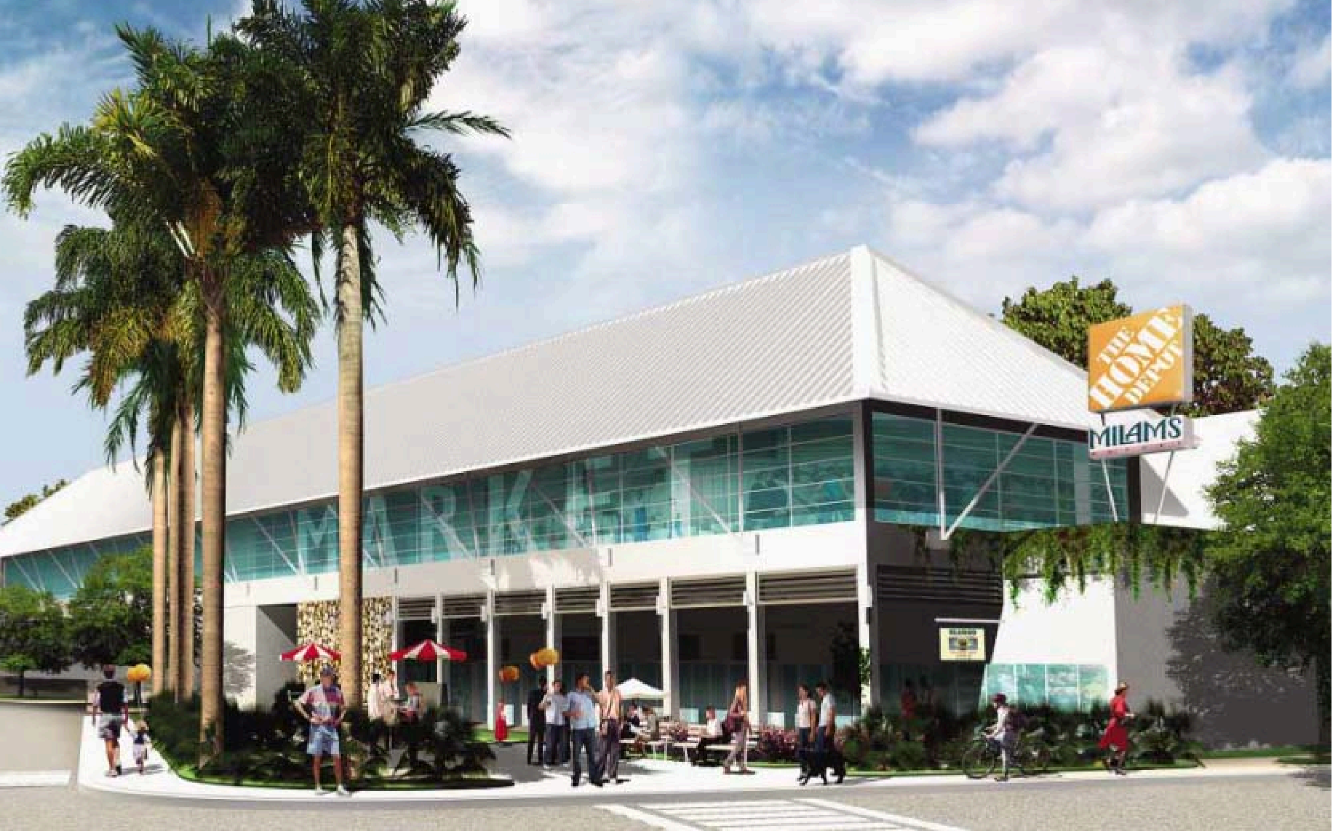


Target, Albany, California The design, by RSP Architects, fits into its neighborhood's industrial character. It features an exoskeleton of exposed steel beams and corrugated-metal panels, revealing the building's internal structure. An adjacent facade is fronted with an airy glass entryway that helps break down the building's scale.

PHOTOGRAPHY: COURTESY RSP ARCHITECTS

Is there hope for the BIG BOX?





Home Depot, Coral Gables, Florida
The design of this 85,000-square-foot store, which will open in 2006, includes a "living facade," made of sleek metal louvers and glass. Surrounding landscaping will help the store fit into its setting, while smaller, adjacent stores will encourage pedestrian activity and provide revenue. Parking will be stacked on top of the store, minimizing lot space.

Vermont, have all proposed or implemented retail-size caps. Portland, Oregon, has established voluntary maximum parking ratios for stores to minimize lot sizes. Most locales—almost silent only 10 years ago—now influence big-box design, notes Rich Varda, chief architect for Target.

For example, one of Target's more dynamic stores was developed under the careful watch of Albany, California's planning department, to whom Target and Minneapolis-based RSP Architects presented designs several times. Built in an industrial area, the store, completed in October 2004, fits into the neighborhood's character while adhering to the building standards of a zone-four earthquake zone. Its design features a concrete slab base and an exoskeleton of exposed steel beams and corrugated-metal panels, revealing the building's structure as if it were a retail version of the Centre Pompidou. Another facade is fronted largely with an airy glass entryway. The variety of elements not only catches the eye, but helps break down the scale of the 164,000-square-foot, two-story project. "It helps building become more connected to the area," says RSP principal Mic Johnson, about the review process. Johnson points out that the planning department also suggested a local civil engineer and landscape architect, whom Target hired, so the project became "even more grounded in the community."

In Coral Gables, Florida, Home Depot enlisted Florida architect Max Strang, AIA, to develop an 85,000-square-foot store after, as Strang says, "the planning department would not let them do their typical big box." The building, set for a 2006 completion, uses a "living facade," built in a tropical style and fitted with sleek metal louvers and glass. "We wanted it to be more than just cutesy add-ons and special effects," says Strang. To limit surrounding parking, a two-level parking deck will be stacked on top, along with a second-floor pedestrian colonnade, where a drugstore, a grocery store, and a garden center will be located. Clerestory windows will admit natural light, while tropical landscaping, including a 1-acre park filled with native vegetation, will soften exterior massing.

Bowing, in part, to community demands that stores match their contexts, companies have developed regional architectural models. Wal-Mart offers Alpine, Coastal, Mediterranean, and Mission styles. Target's offerings include Mountain/Northwest (used in Colorado, Washington, and Oregon), Spanish/Mediterranean (Florida, Texas, and the Southwest), and Georgian/Colonial (used on the East Coast). Unfortunately, such models are often derivative and watered-down, doing little to elevate the architecture. Varda notes that to further customize the designs, about two thirds of Target's new stores vary from its prototype.

Developers, too, are taking design into their own hands, although they use extra money, not government coercion, to convince retailers to stray from their formulas. Magnus Lindholm, a Swedish developer, paid perhaps millions (he won't say how much) to make sure his Wal-Mart/Home Depot, which was completed in spring 2003 in Avon, Colorado, near Vail, wasn't the typical big box. "I don't like ugly things," explains Lindholm, who adds that he wanted the stores (a 150,000-square-foot Home Depot and 180,000-square-foot Wal-Mart) to fit with the overall aesthetic of his commercial, residential, and office development. Lindholm's team, led by Arthur Erickson and Nick Milkovich Architects, helped minimize the visual impact of the stores by setting them against a nearby hillside (held in place with a retaining wall), constructing a large berm using 100,000 cubic yards of dirt (reaching the height of the nearby highway, usually a no-no in a business where stores become advertisements from the road), and planting over 500 native trees. An elegant wood-and-steel colonnaded canopy, about 600 feet long, in front of the stores, helps further disguise their big-box mass, and encourages pedestrian activity. A meandering park separating the stores is laid with Canadian fescue grass, sloping greens, and a small pond. "We're trying to create a sense of community to draw small businesses into the area, not push them away," says Lindholm's construction manager Erik Petersen.

Stores change themselves

Stores, meanwhile, are making changes on their own. Not only are they bowing to community pressure, but they are enhancing design to improve their images and stay competitive in a market where cheap prices, while still necessary, are no longer the only element shoppers desire.

"It's all about what differentiates you," says Strang. "Stores are learning that they have to reinvent themselves from a design standpoint in order to compete." To further improve its designs, Target revealed a new prototype for its stores in March 2004, with larger sidewalks, more landscaping, more lighting, varied building masses, larger entrances, and more

IMAGE: COURTESY MAX STRANG ARCHITECTS

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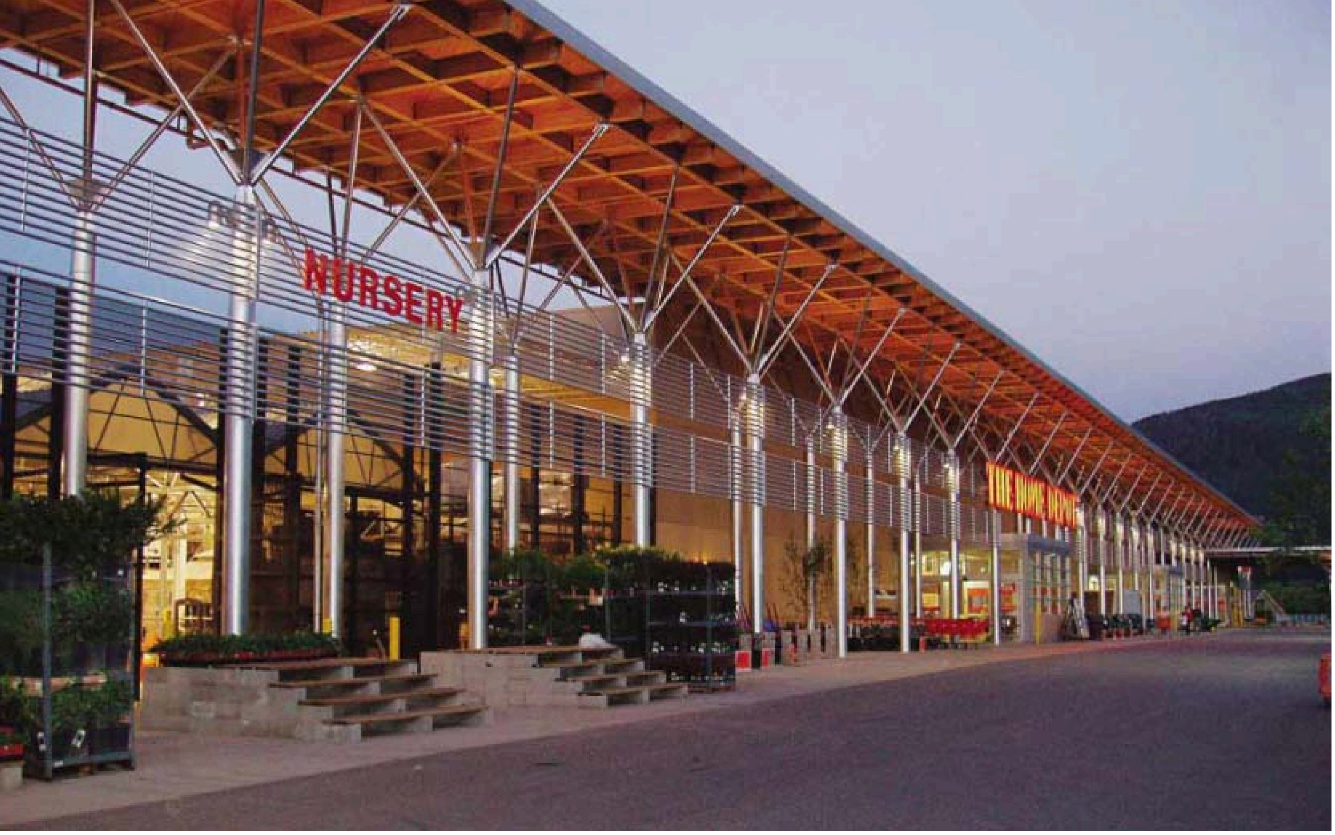

Wal-Mart and Home Depot, Avon, Colorado
A 600-foot-long wood-and-steel canopy in front of these two stores helps disguise their mass and encourages pedestrian activity. The stores are further minimized through surrounding landscaping, and by being built against a nearby mountainside.

windows, to name a few elements. Other big stores are beginning to focus on design strategies to give them an edge in a field where getting prices lower than Wal-Mart's is almost impossible. But even the elephant in the room, Wal-Mart, long known for sidestepping design in favor of price, is putting new emphasis on its stores' designs. The company revealed its own new prototype in July 2004. Changes include earth-toned exteriors (instead of blue and gray), facades with "variety in the massing," more daylighting, lower shelves, earth-toned interior colors, "more navigable" signage, and colored concrete floors (instead of tile). Still, the company lags far behind Target, whose focus on design has been central to its image since its inception.

To help improve interiors—an area where most big-box stores have generally lagged behind, Best Buy has its own design labs of sorts: smaller, edgier versions of the store that serve niche markets. In spring 2004, ESI Design created its "Escape" store in Lincoln Park, Chicago, which features exposed brick, rough-hewn steel, and red neon lights, among other "edgy" or "urban" elements. "Studio D," in Naperville, Illinois, replaces linear aisles with small, circular shelves. In many ways, says ESI's Moore, these designs influenced its 45,000-square-foot West Hollywood Best Buy, built concurrently. Shelf heights came down, partially translucent stretch fabrics replaced plastic and paper signs to increase visibility. The sales floor was split into various rooms, built to show off merchandise in a more pleasing, familiar environment than, say, rows of TVs. Still, most of the small stores' more experimental elements have not yet been incorporated at the big-box level.

A 110,000-square-foot Home Depot on Manhattan's 23rd Street (completed in 2004), designed by GreenbergFarrow Architects' New York office, also has low rack heights, which not only aid orientation, but help stores show off more merchandise at once. Transparent GKD mesh railings help maintain maximum sight lines. In the center, a double-layer skylight pours natural light inside, and modern lines lend the impression of "a loft on steroids," notes architect Navid Maqami, AIA, of GreenbergFarrow Architecture. White walls are simple, but natural elements such as wooden railings and strategic incandescent lighting make the store more welcoming.

As this store demonstrates, stores are changing their models because of perhaps the most important barometer of all: economic opportunity. As they reach saturation in suburban and rural locations, big boxes have begun moving into urban areas, malls, and lifestyle centers (basically outdoor malls designed to look like urban areas), where new markets (and often wealthier clients) beckon. It's been widely noted that shoppers from Bergdorf Goodman are now warming up to stores like Target. Varda notes that Target, in only a handful of malls a few years ago, is now in more than 40, while the company (already a fixture in larger metropolitan regions) has recently opened stores in urban Chicago, New York, and Los Angeles. Bill Correll, head of architecture for Wal-Mart, cites urban stores in Atlanta, Cleveland, and New Orleans, noting that "participating with local communities in the design of Wal-Marts certainly plays an important role in our being accepted in new areas."

"WE'RE TRYING TO CREATE A SENSE OF COMMUNITY—TO DRAW SMALL BUSINESSES INTO THE AREA, NOT PUSH THEM AWAY."

To fit into these markets—with tighter, more varied configurations than in the suburbs—stores must often be smaller, have more than one level, use multilevel garages, abut street lines, sometimes even have housing on top. They face stricter pressure to conform to their surroundings, particularly in historic areas. Maqami's three-level Manhattan Home Depot, developed within an 1859 cast-iron structure, was built under the watchful eye of the local preservation board, and shows only a trace of the company's logo on its exterior. Entrance windows abutting the street show off merchandise, a rarity for big boxes, which rarely cater to pedestrians. Two shopping-cart escalators—now used by many companies—bridge the entrance floor with the floor below. Its size, much smaller than the typical big box, does not allow for lumber or car loading, but that's not the point. In the city, stores need to be designed for carry-out items. Maqami says that the challenges of these environments generally make the stores more interesting. His 250,000-square-foot Target store at River Plaza in the Bronx is located

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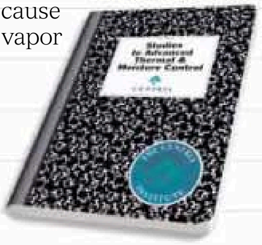

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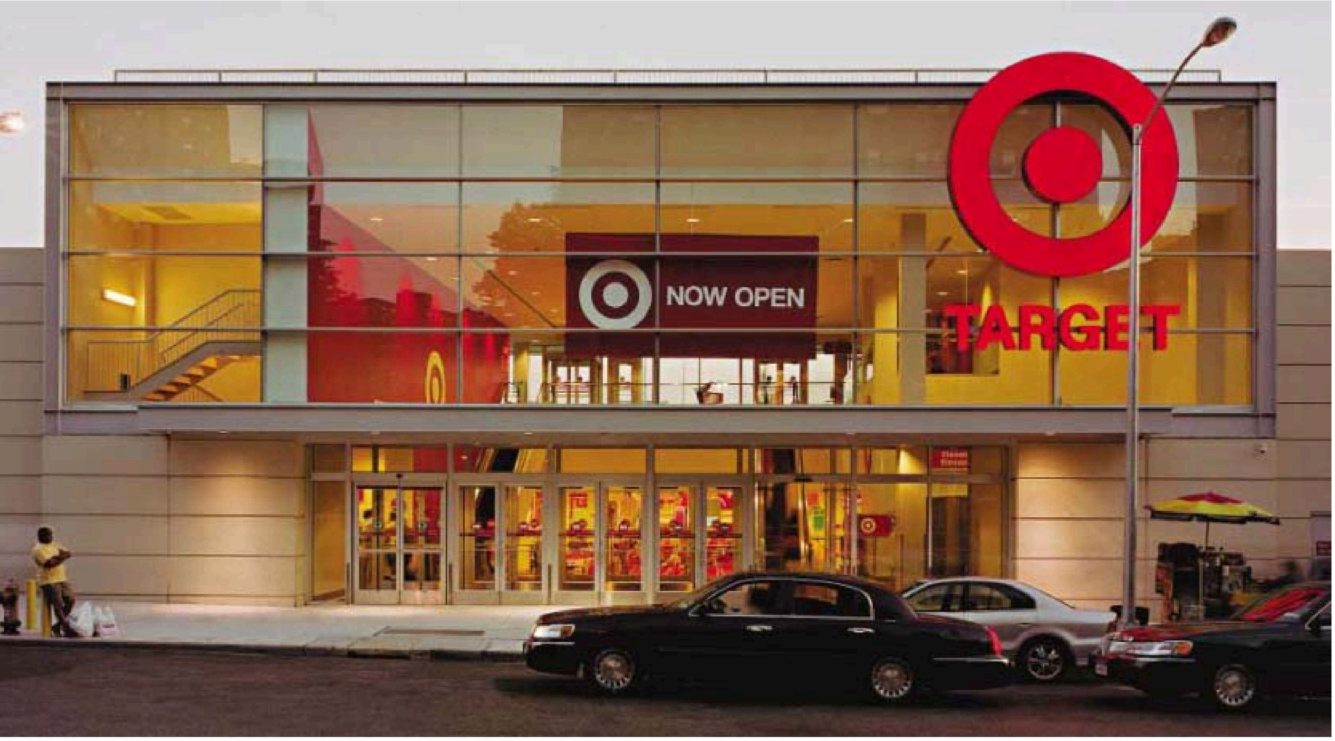


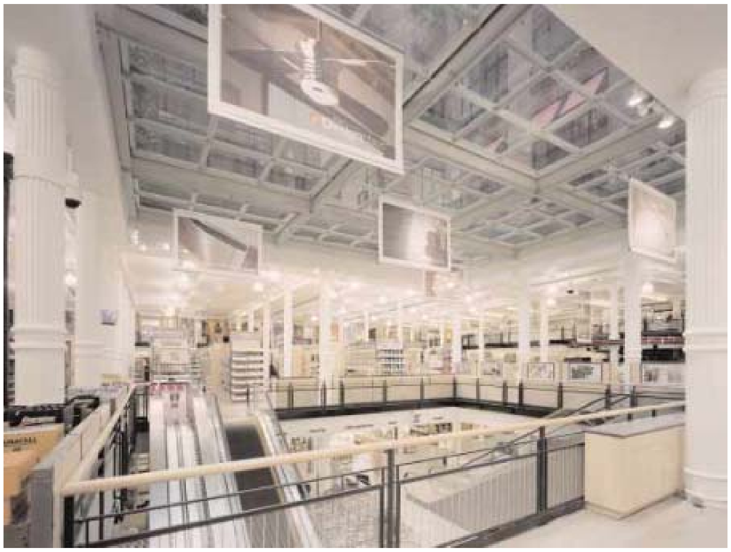
Target, River Plaza, Bronx, New York A 50-foot glass facade (left) lends visual connection between levels and breaks down the store's scale. Its bayed doorways evoke an urban streetscape.

next to railroad tracks, a river, elevated trains, and an expressway. To fit into this spot, parking is stacked onto the building's roof, while the 50-foot facade is made largely of glass, breaking down the store's scale. This helps the store mesh with the neighborhood, and lends visual connection between all three levels. An entrance divided by recessed glass doors is reminiscent of an urban streetscape. Smaller stores attached to the main one via walkways create a pedestrian environment. Unfortunately, much of the development is still fronted with blank concrete walls, an apparent concession to convention.

Will things really change?

While the projects cited above are good examples of effective redesign, the question remains: Do they represent the new order or are they exceptions? Sure, companies will create innovative designs when they are pressured or want to enter a new market. But what about the thousands of other stores?

New prototypes are encouraging, but there's still a long way to go. Even better big-box designs today aren't architectural masterpieces. Many resort to a safe, Disneyfied recreation of reality. Hackneyed colors, bland materials, and historic references seem behind the times. Other problems remain. For one, suburban stores don't seem willing to abandon their huge parking lots for the space-saving features of urban stores. Experts are doubtful this will change, except in some suburbs' small islands of pedestrian life. Brent Ryan, a professor at the University of Illinois-Chicago, suggests that the Congress for New Urbanism implement clear standards for incorporating commercial retail. Another problem is that rural big boxes keep getting bigger, with limits forseeable only when (or if) customers get overwhelmed.



Home Depot, 23rd Street, Manhattan, New York Mesh railings maintain sight lines (below), a double-story skylight provides natural lighting, and modern lines evoke "a loft on steroids," says the architect. Shopping-cart escalators facilitate a multistory design.

Outside of community and market pressure, perhaps the biggest influence is money. Big-box stores still thrive because of their low prices, most companies say, so for stores to improve, good design has to come cheap. At Strang's Home Depot, costs are offset by rent from adjoining stores, an increasingly common practice. Varda notes that extra design-studio time can save thousands, while Maqami notes that Home Depot had no idea how much his team could accomplish on a budget. Wal-Mart's Correll notes that many of his company's design improvements, initially more expensive, have brought long-term gains. Concrete floors save on cleaning, and fluorescent lighting is more energy efficient than metal halide in the long run. And what about the impression that better design might indicate higher prices? "It's not like we're a new retailer on the block," says Wal-Mart's Correll. "Having a good shopping experience is not something that's going to undermine that reputation." Still, some are skeptical of retailers' ability to improve on their own. "Left to their own devices, retailers will typically take the cheapest and less creative way," notes Daryl Mangan, longtime chair of the ICSC's design awards."Improvement will only continue as long as taxpayers and customers encourage retailers to create more attractive environments."

Fresh ideas are everywhere, although most remain unbuilt. GreenbergFarrow's Maqami designed a store for Manhattan's Hudson River waterfront, near Tribeca, which would have been built under a man-made groundscape to offset its size. Students at Syracuse University's Graduate School of Architecture envisioned designs for an IKEA in Red Hook, Brooklyn, that expand and contract, have rooftop meeting areas, and are open for community activities (even car races in the parking lot) during off hours. Students at the University of Arkansas Design Center have

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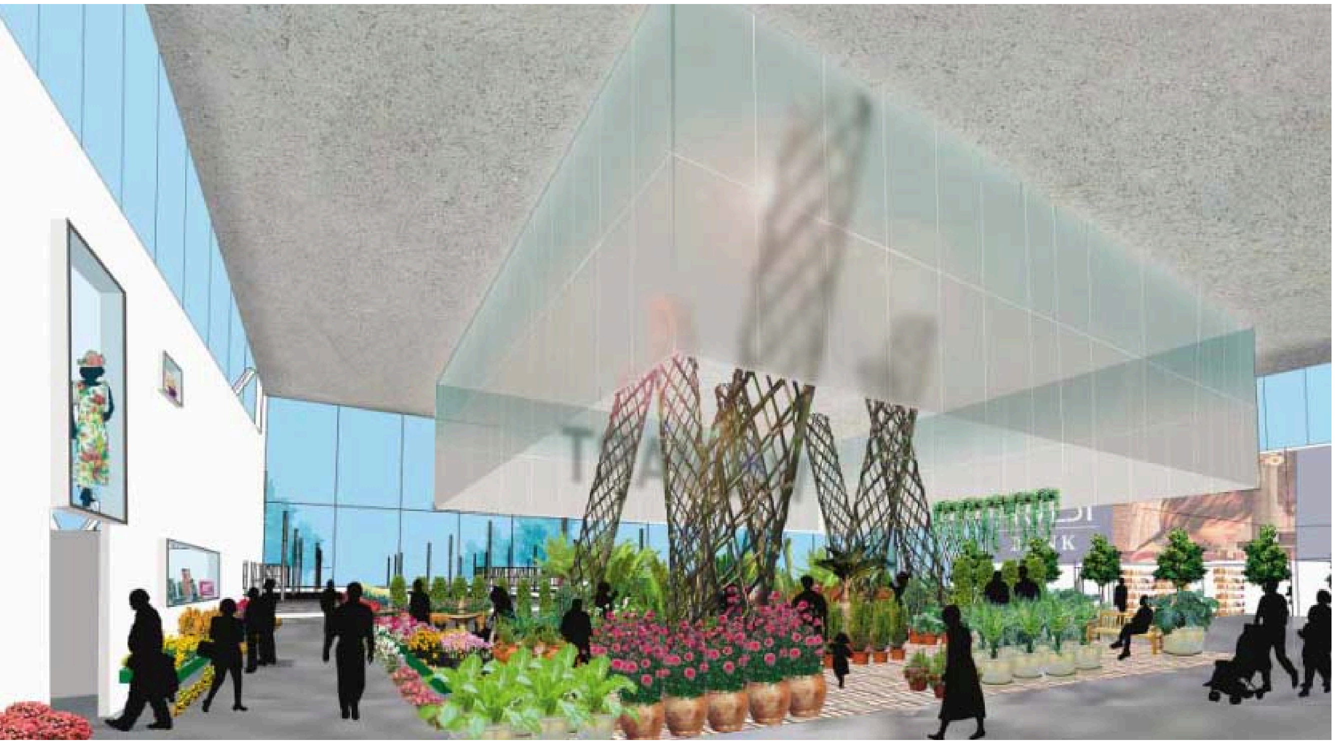
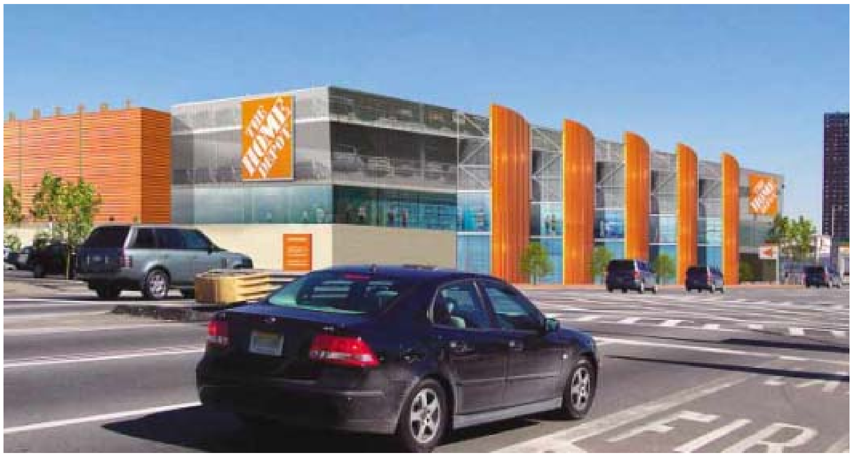


Future Wal-Mart? Students at the University of Arkansas envisioned a bright, lofty Wal-Mart entry (left), created by locating the garden center at the front of the store and using a glass curtain wall (latticed steel beams provide structural support). A Wal-Mart (not shown) that is opening in McKinney, Texas, has a photovoltaic facade, a huge wind turbine, underfloor heating, and a water-retention pond for landscape irrigation.



Future Projects

SBLM's Home Depot near the Holland Tunnel in New Jersey (middle) will use big-box materials in a new way: Orange metal panels fan out from the building, and galvanized-metal screens hide stacked parking. Maqami's big-box proposal for a Hudson River pier (above) would have been hidden by groundscape.

partnered with Wal-Mart to envision courtyards and gardens in parking lots, porches and arcades for entrances, and innovative ways to stack stores even higher. Big-box companies are also planning interesting models. New York–based SBLM's design for a Home Depot near the Holland Tunnel in New Jersey will employ the same materials used in typical big-box stores in a creative way. These include tall, orange corrugated-metal panels that will fan out from the face of the building; a glazed curtain-wall facade; a curved, corrugated-metal canopy; and stacked parking sitting behind a galvanized screen-metal panel. Varda says Target may replace much of its in-store inventory with digital displays. Responding to environmental criticism, Wal-Mart was scheduled in July to open an experimental store, designed by California-based LPA Architects, that must be the greenest big box in history. Located in Mckinney, Texas, the store has photovoltaics built into much of its facade, a 146-foot-high wind turbine, and will get much of its heating energy from used oil in its auto department and used frying oil from its food area. Underfloor heating and cooling will save energy inside, while outside, a water-retention pond will store water to irrigate native landscaping around the parking lot. The lot itself is heavily planted with trees and uses, in part, "pervious" pavement, allowing water to seep under it, rather than running off. Whether any of these technologies will be used in future stores depends on their success at the store, says Don Moseley, Wal-Mart's experimental projects coordinator.

Improving the quality of big-box store design isn't just an aesthetic whim. The stores, tied intimately to urban and suburban sprawl, have already come to define the worst elements of our landscape, and of our culture, putting profit over the good of the community. They continue to impose their soulless lack of identity onto cherished areas. Instead of letting big boxes impose their will, we all need to impose our own. "Freedom is a wonderful thing," says Mangin. "But it needs to be checked once in a while." ■

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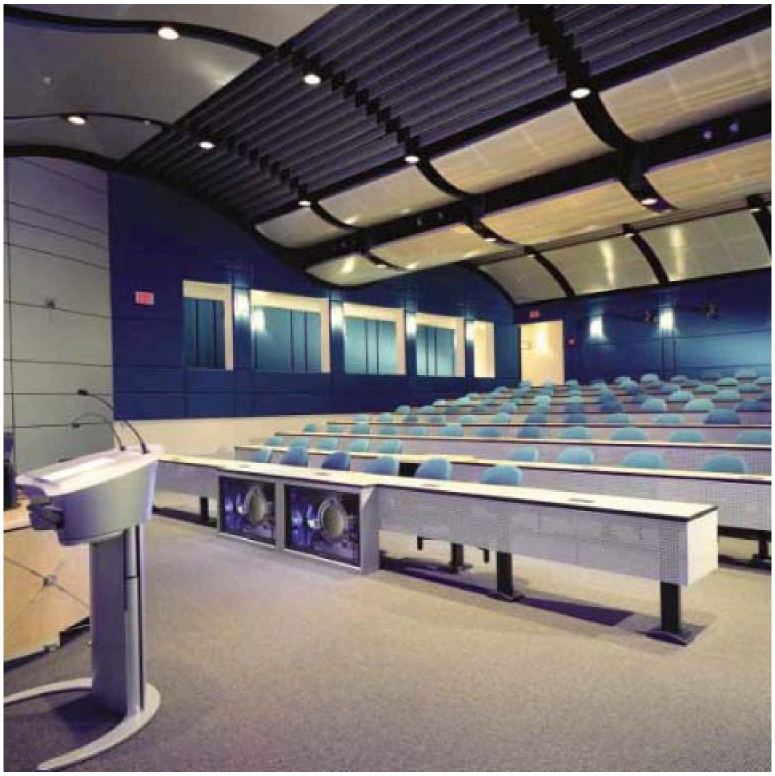

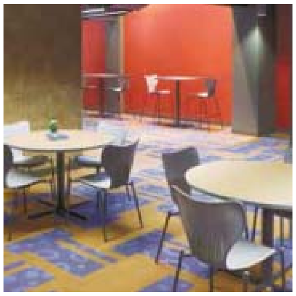

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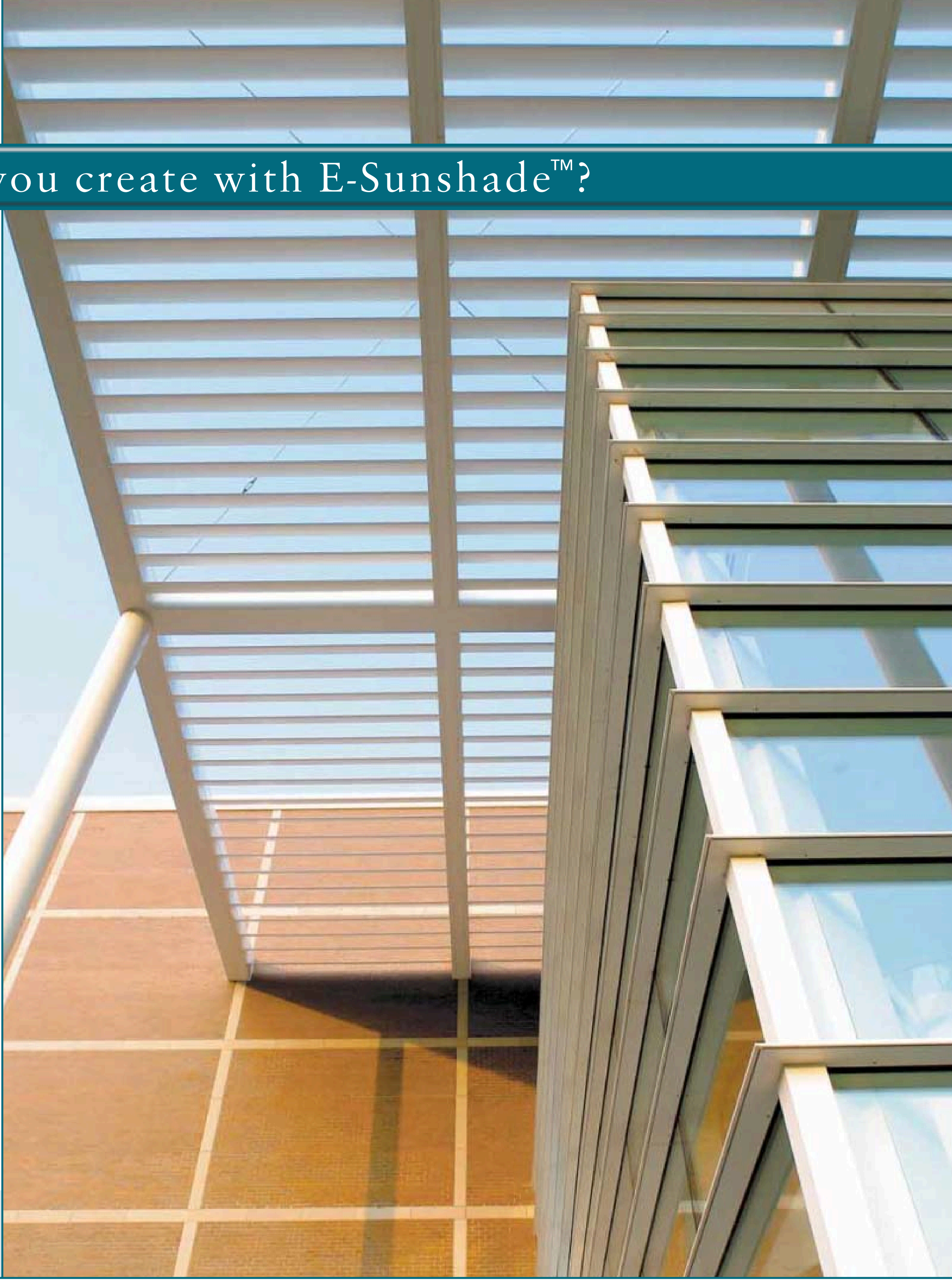

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Is Bigger Better?

Architecture is pumping up using engineering muscle combined with design agility

By Suzanne Stephens

Scale always presents a daunting challenge to architects—particularly supersize projects. The sheer mass, myriad elements, and structural makeup of big buildings demand a willingness to attempt the grand gesture, tempered by a fascination with engineering. It is no wonder that design architects have turned for inspiration to a formal vocabulary of infrastructure used for highways, bridges, tunnels, and industrial buildings such as airplane hangars. This is not a new story: In the early 20th century, Modernists also looked to engineering methods and machine imagery in designing any number of buildings. Yet today's architects, working hand-in-hand with innovative structural engineers such as Arup, Buro Happold, and Schlaich Bergermann und Partner, are creating even bolder and bigger works with the help of computer modeling and advanced building materials and techniques.

Included in this issue are four buildings that illustrate these infrastructural leanings. Two projects—Sage Gateshead, a performing arts center in northern England designed by Foster and Partners, and the Milan Trade Fair, outside of Milan, designed by Studio Fuksas—also serve as visible urban regenerators for their regions by acting as magnets for attracting tourists, jobs, and related enterprises. Two other projects in the issue, the BMW Central Building in Leipzig, Germany, designed by Zaha Hadid Architects, and the Renault Square Com on the western edge of Paris, a renovation by Jakob + MacFarlane, concentrate on car factories to retool a company's commercial image, with the BMW plant even presenting new ways to organize the work process.

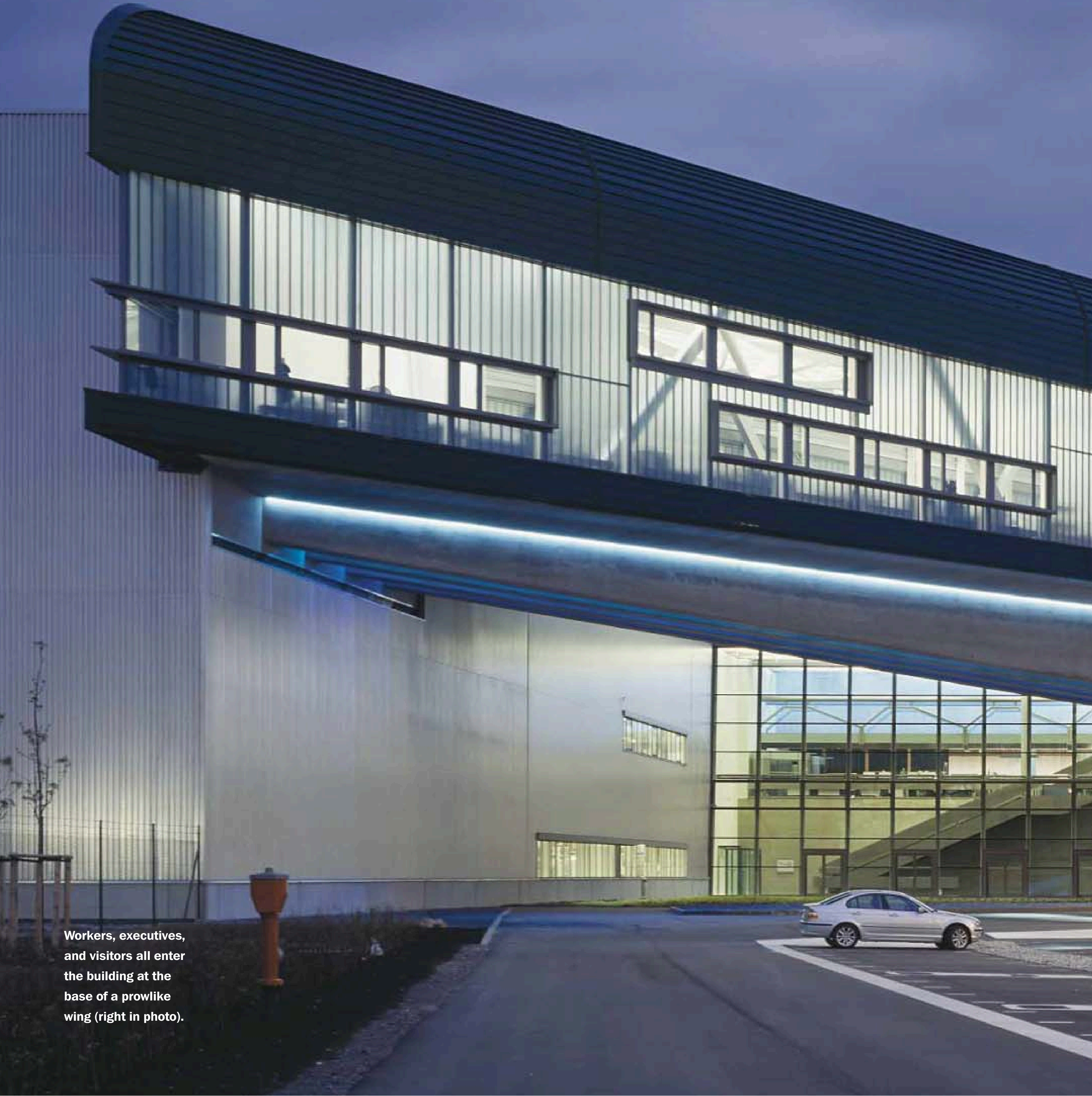
These efforts display bravado and imagination, whether their size is a humongous 2.1 million square feet (Milan Trade Fair) or a relatively petite 156,000 square feet (Renault). All illustrate ways of introducing design into the physical environment that has relevance to big-box stores (page 68), a continually vexing subject for designers and communities.

The question of their ultimate success will relate, however, not just to their size and daring execution, but finally to the sensitivity they display to the human scale. After all, this is architecture, not just overscaled infrastructure. ■

1. **Sage Gateshead**
   Foster and Partners
2. **Renault Square Com**
   Jakob + MacFarlane
3. **BMW Central Building**
   Zaha Hadid Architects
4. **Milan Trade Fair**
   Studio Fuksas

PHOTOGRAPHY: © RICHARD BRYANT/ARCAID (1); JEAN-MARIE MONTHIERS (2); ROLAND HALBE (3); GIUSEPPE BLENGINI/STUDIO FUKSAS (4)

Zaha **Hadid** provides the connective tissue for a BMW complex by designing a **CENTRAL BUILDING** that brings people and cars together



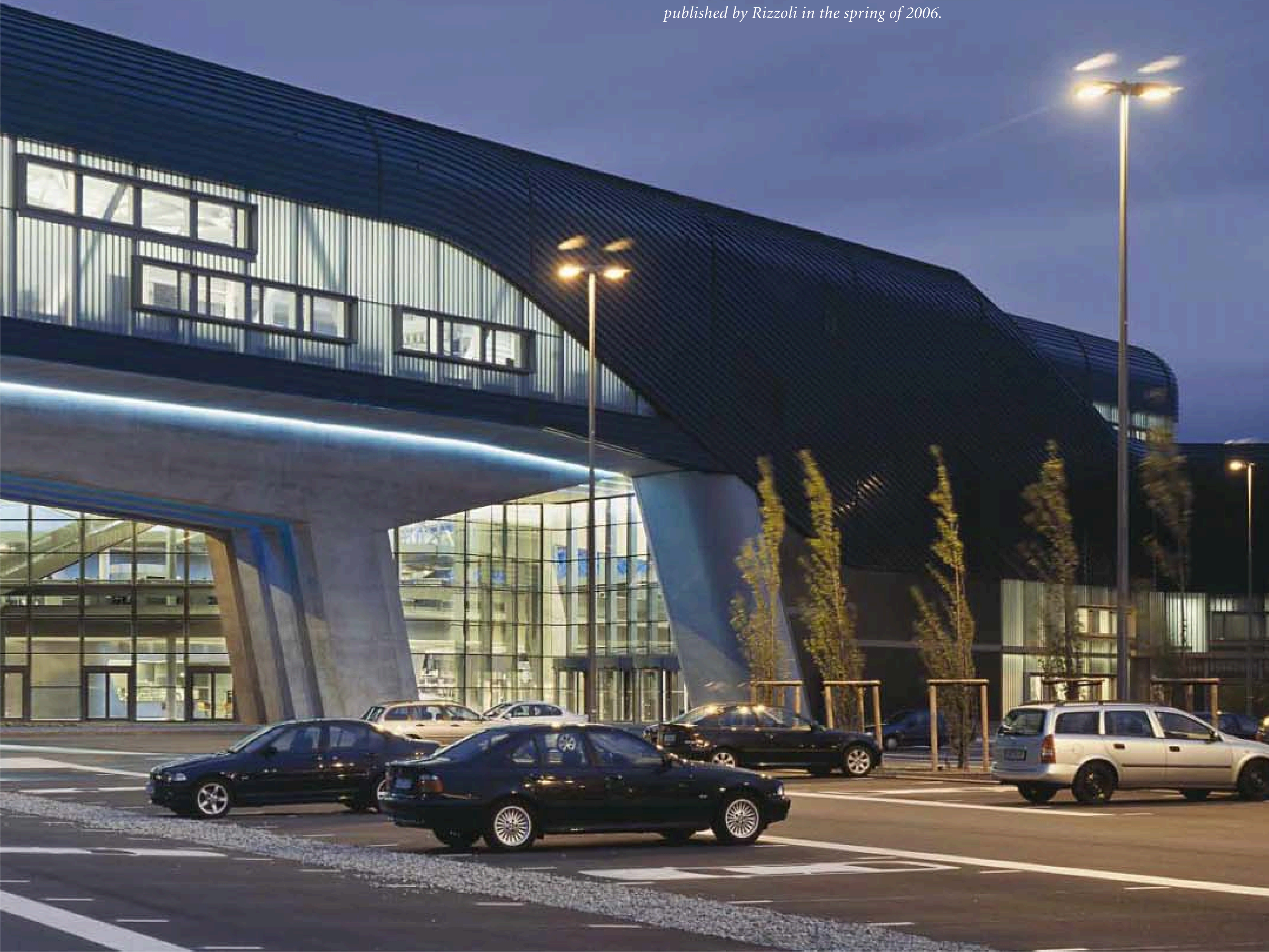
Workers, executives, and visitors all enter the building at the base of a prowlike wing (right in photo).

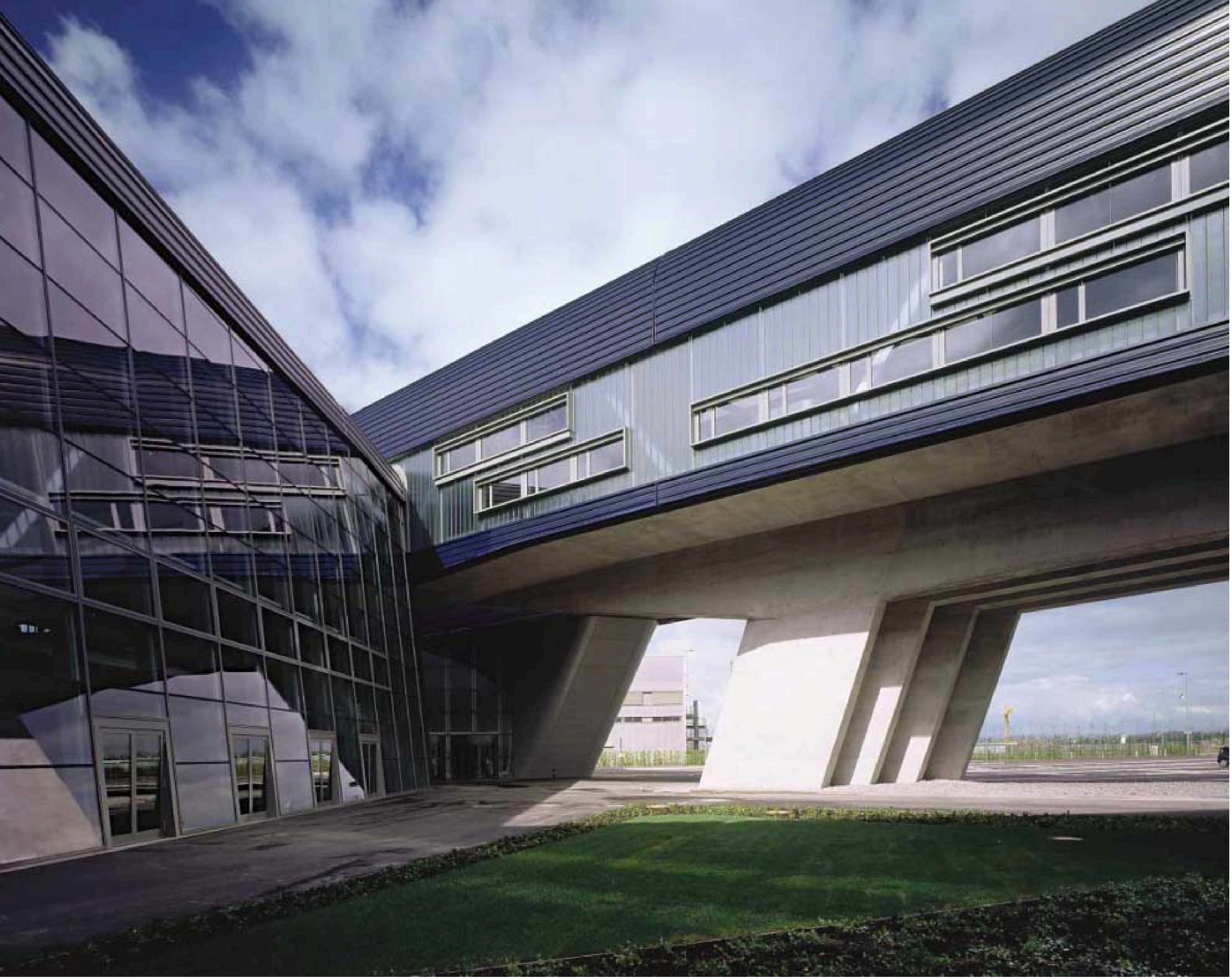
By Raul A. Barreneche

Architects can't shake their fascination with industrial buildings. Icons of functionalism such as Fiat's Lingotto factory in Turin, the work of engineer G. Matté Truco (1926), and Peter Behren's AEG turbine factory in Berlin (1910), to name two relics of another era, still loom large in the imaginations of architects romanced by the buildings of manufacturing. But in our postindustrial, information-driven society, few factories manage to create inspired architecture from the exigencies of the assembly line.

In 2002, the German auto giant BMW invested in a high-profile competition to design a Central Building at its factory on the outskirts of Leipzig, a $1.55 billion complex where 5,000 employees can produce up to 650 of BMW's 3-Series sports sedans daily. From a field of 25 international architects, the company picked Pritzker laureate Zaha Hadid, whose sophisticated design turned conventions of factory design on their ear. Blue-collar factory workers and white-collar managers commingle in a fluid matrix of automotive production and administration. Unfinished auto bodies on their way to the assembly line parade silently on cagelike

Contributing editor Raul A. Barreneche is the author of Pacific Modern *to be published by Rizzoli in the spring of 2006.*

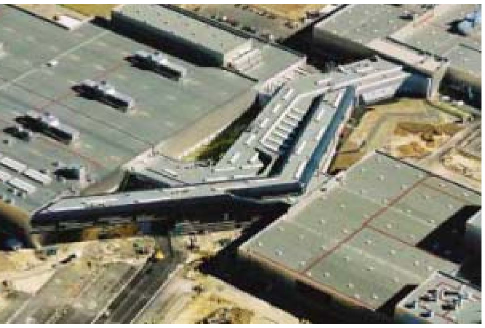




conveyor belts suspended above workers lunching in the corporate canteen or laboring in their cubicles. "Our idea was always to challenge the typology," says Hadid. "It took tremendous chutzpah for BMW to allow us to do this project."

German Chancellor Gerhard Schroeder officially inaugurated the plant with much fanfare in May 2005, although it was already up and running in February. The first 320i drove off the assembly line in March.

Though Hadid purports to shatter typologies, her building has no real precedent. It functions as a centralized node connecting three production buildings, designed by BMW's own real estate and facility management group and completed in 2004, each of which contains a distinct segment of the assembly sequence: the fabrication of raw auto bodies (645,000 square feet), the paint shop (270,000 square feet), and finally the vast assembly hall (1,075,000 square feet), where painted shells are fitted out and released as finished luxury vehicles. Hadid's 430,000-square-foot building, located at the intersection of these three production sheds, contains offices, an employee cafeteria, an auditorium, and glass-enclosed "audit rooms," where cars are randomly plucked off the assembly line, dissected, and analyzed in a public autopsy for quality control. Her building functions neither solely as administration nor as production space; it melds two integral but typically isolated strands of industrial business into a mutually inspiring relationship.



Like Truco's Lingotto factory, with its iconic rooftop racetrack, Hadid wove architecture from movement. But instead of the turning radius of a Fiat roadster, Hadid traced the flow of workers and visitors entering and exiting the building, employees traversing the space en route to lunch or from their lockers, the looping path of unfinished cars

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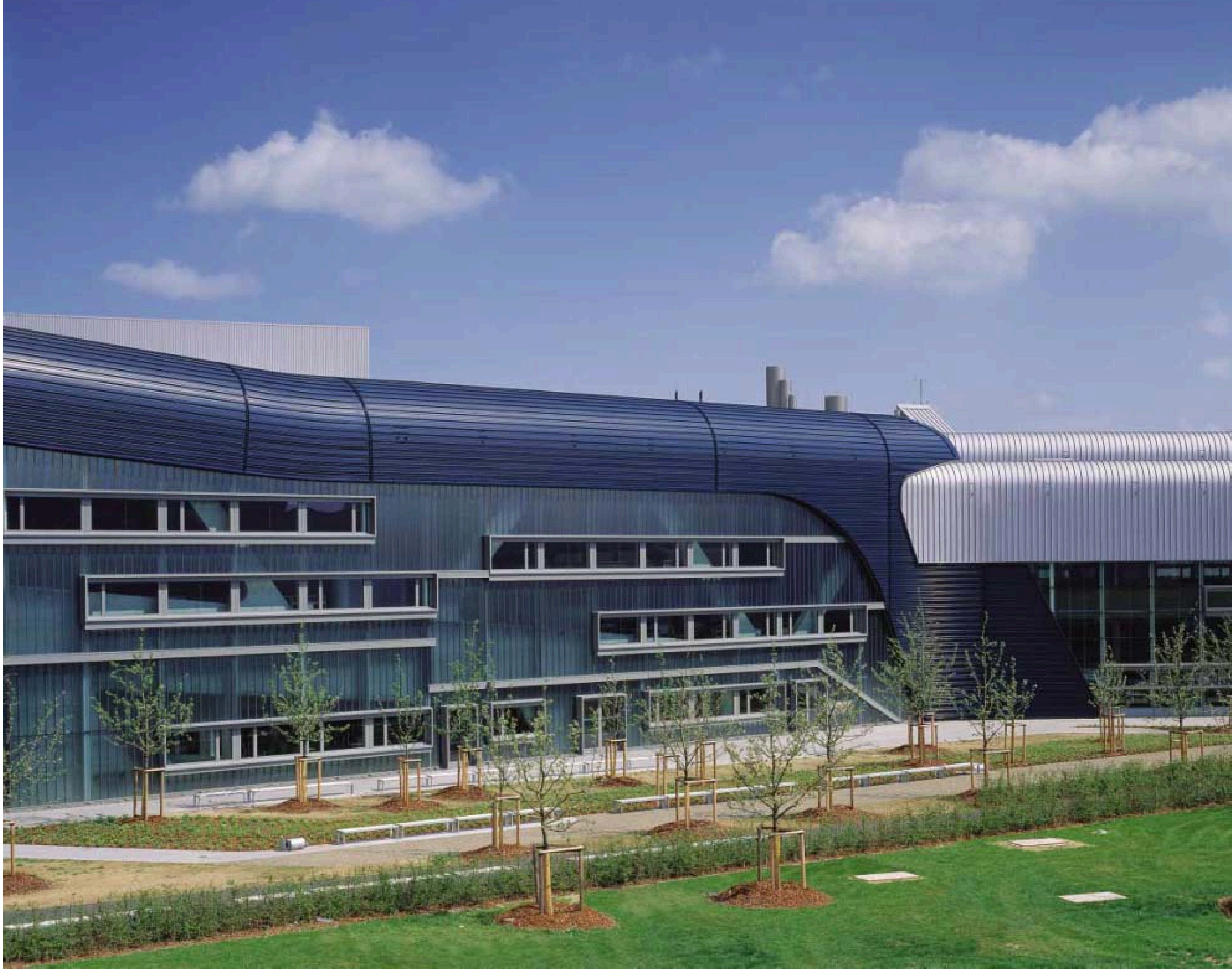
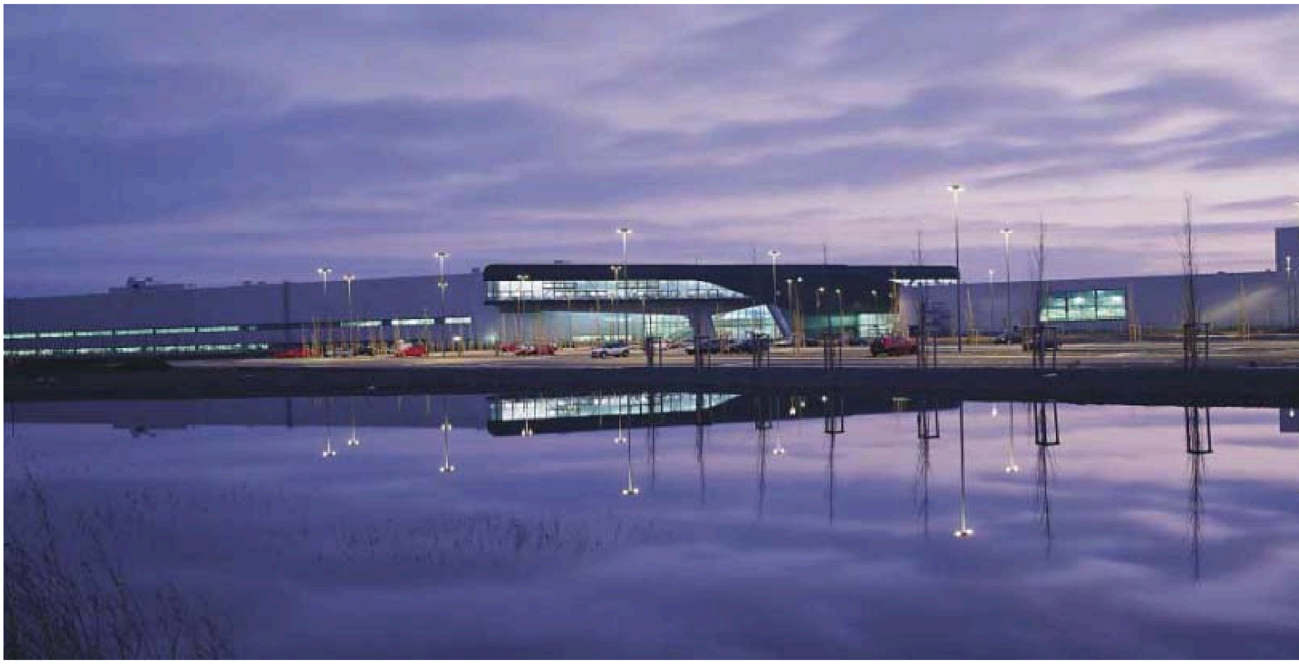
Project: *Central Building, BMW Plant, Leipzig, Germany*

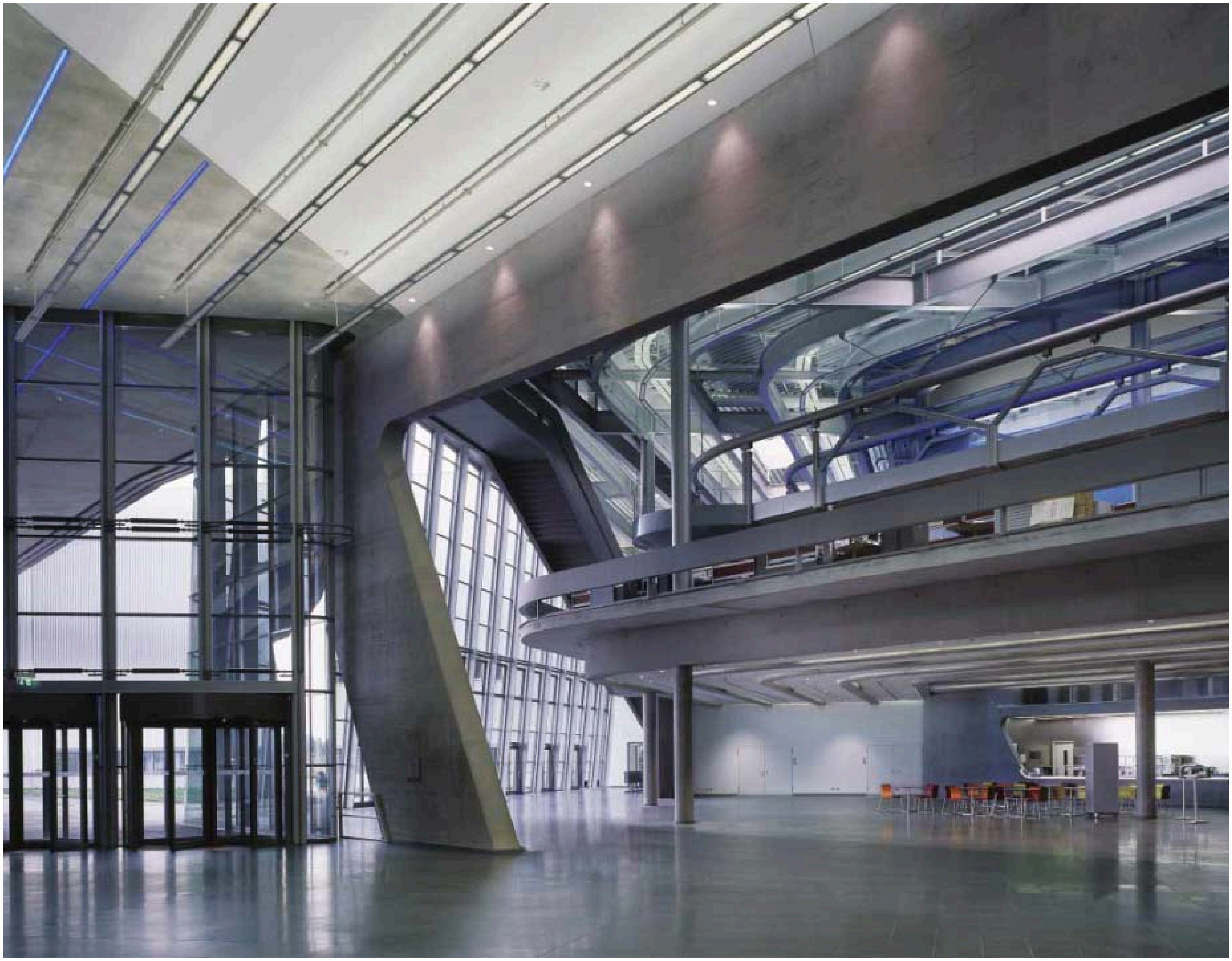
Architect: *Zaha Hadid Architects—Zaha Hadid, Patrik Schumacher, design principals; Jim Heverin, Lars Teichmann, project architects; Eva Pfannes, Kenneth Bostock, Stephane Hof, Djordje Stojanovic, Leyre Villoria, Liam Young, Christiane Fashek, Manuela Gatto, Tina Gregoric, Cesare Griffa, Yasha Jacob Grobman, Filippo Innocenti, Zetta Kotsioni, Debora Laub, Sarah Manning, Maurizio Meossi, Robert Sedlak, Niki Neerpasch, Eric Tong, design team* **(continued on page 90)**

PHOTOGRAPHY: © ROLAND HALBE, EXCEPT AS NOTED; BMW AG (BOTTOM); BMW AG/ERIK CHMIL (OPPOSITE, BOTTOM)





The 430,000-square-foot building rises from a flat plain in what had been East Germany (above and right). The BMW complex provides thousands of jobs in an area that has a long history of car making but now suffers from an unemployment rate hovering around 20 percent.



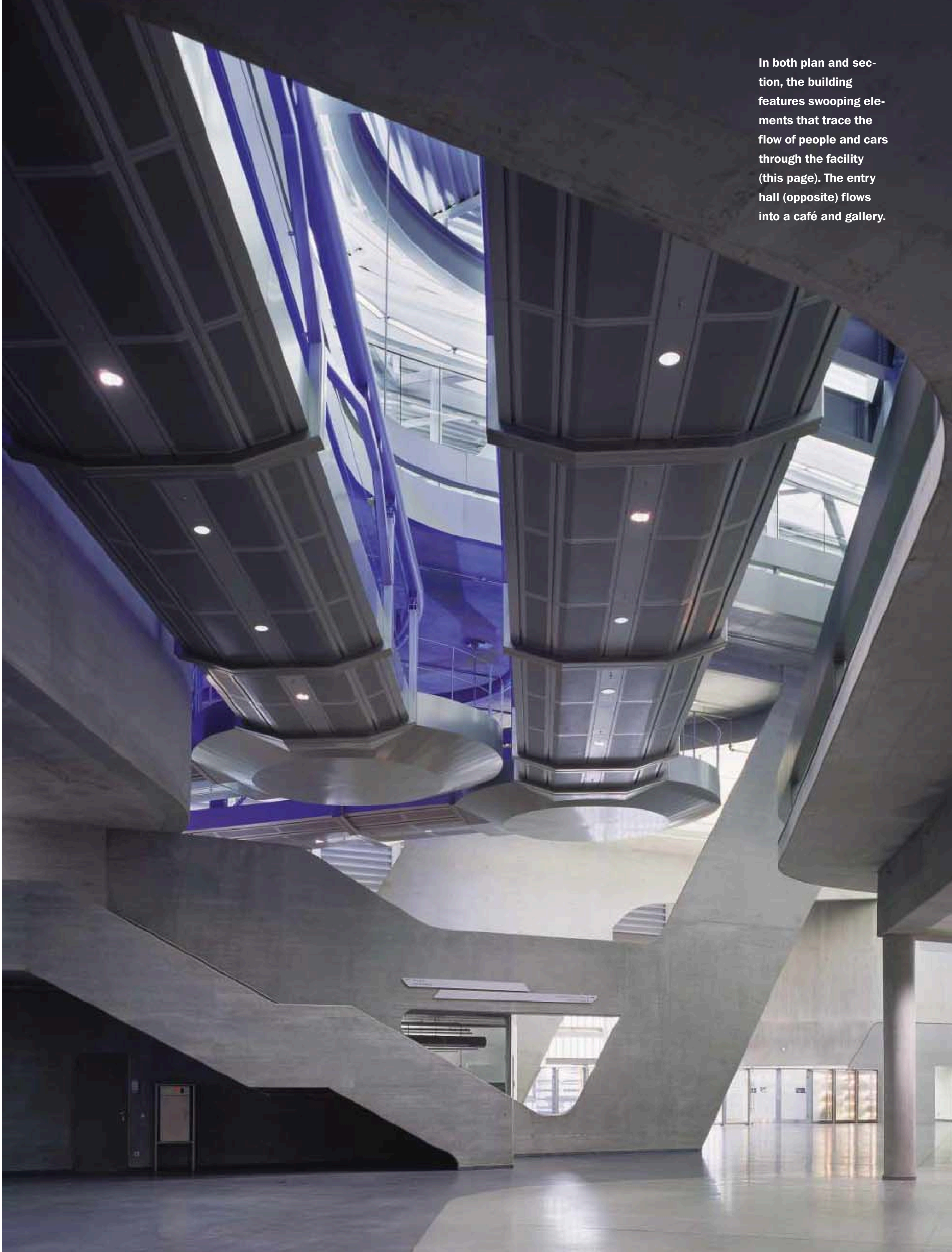
circulating from one plant area to the next. These paths of real and perceived movement coalesce into a nerve center for the larger factory complex. As if exerting a gravitational pull over the site, Hadid's building concentrates flows of people, materials, and communication and distributes them through a knuckle in the site. "We didn't think about the project as compartments; we always saw it as a whole, a single diagram," says the architect.

In plan, ribbons of steel and concrete ribs in the ceiling planes trace lines of motion above soaring volumes defined by steel roofs stretched tautly, like tarpaulins, over a sinuous concrete framework. Floors of rubberized "asphalt" suggest indoor roadways. In section, sweeping staircases and two runs of stepped platforms (containing open workstations) cascade through the space contrapuntally. Half-finished automobiles winding in and out of the central building on the overhead conveyor belts create a temporal datum; the ghostly unpainted cars, illuminated softly by blue uplights within the conveyor structure, move to a slower rhythm than the daily to-and-fro of the building's human occupants. "Our work has always been influenced by ideas of movement. There's always a desire to achieve buildings with fluidity and complexity," says Hadid.

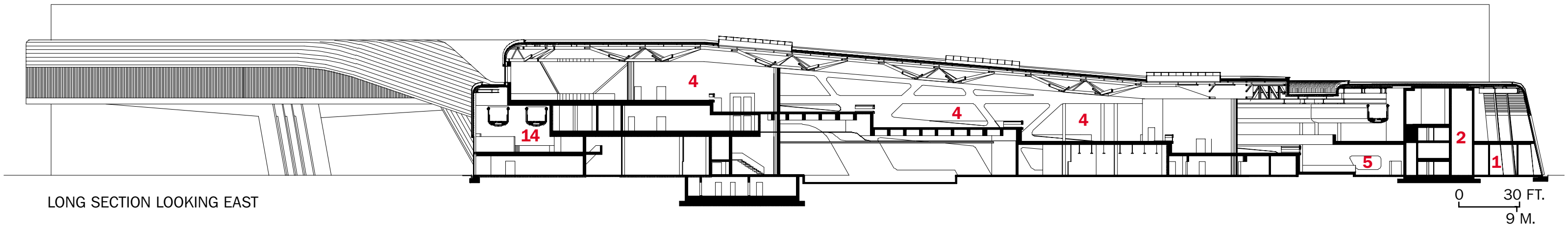
Indeed, every curving corner of the building conveys a sense of fluid motion, from the kinetically angled concrete piers marking the entry into the soaring lobby—as spatially rich and materially polished as any grand museum entry—to the chamfered and filleted exterior walls resembling the angular windows of an automobile, and the gently stepped platforms containing work spaces. Hadid kept the terraced landscapes of open cubicles visually permeable so workers remain in touch with other activities around them. "You don't disappear into your own task. And you don't miss out on what is happening in the corporation. You are reminded of all the things you can and should connect with," explains Patrik Schumacher, Hadid's design collaborator. In that sense, the architects have created an internalized urban space, with layered intertwined threads of activity that generate a lively hum.

The building is also exceedingly democratic. Blue-collar line workers and white-collar managers eat in the same cafeteria. Executives do not inhabit a command center removed from the front lines of the factory; rather, managers work out in the open, very much in keeping with BMW's nonhierarchical culture of transparency and accessibility. As Peter Clausen, the Leipzig plant manager, suggests, "The structure has an impact on everyone's behavior. People don't complain about each other. And you can literally see if the plant is working, like the exposed heart of a huge organism."

Many of Clausen's colleagues initially worried that Hadid's



In both plan and section, the building features swooping elements that trace the flow of people and cars through the facility (this page). The entry hall (opposite) flows into a café and gallery.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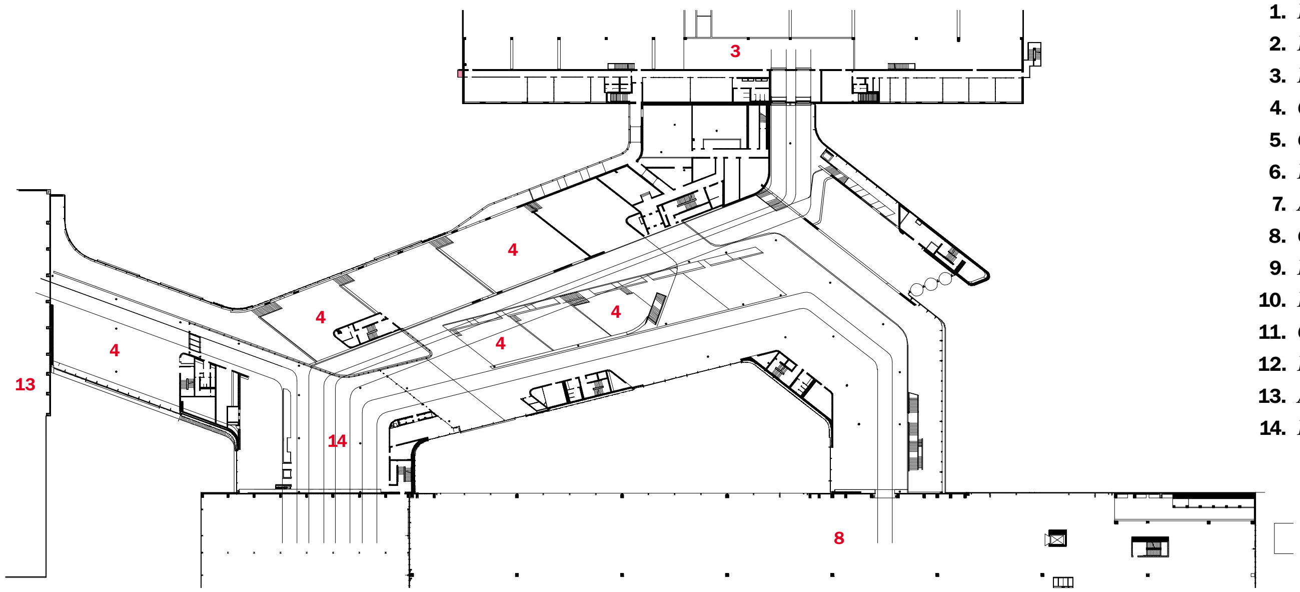
LONG SECTION LOOKING EAST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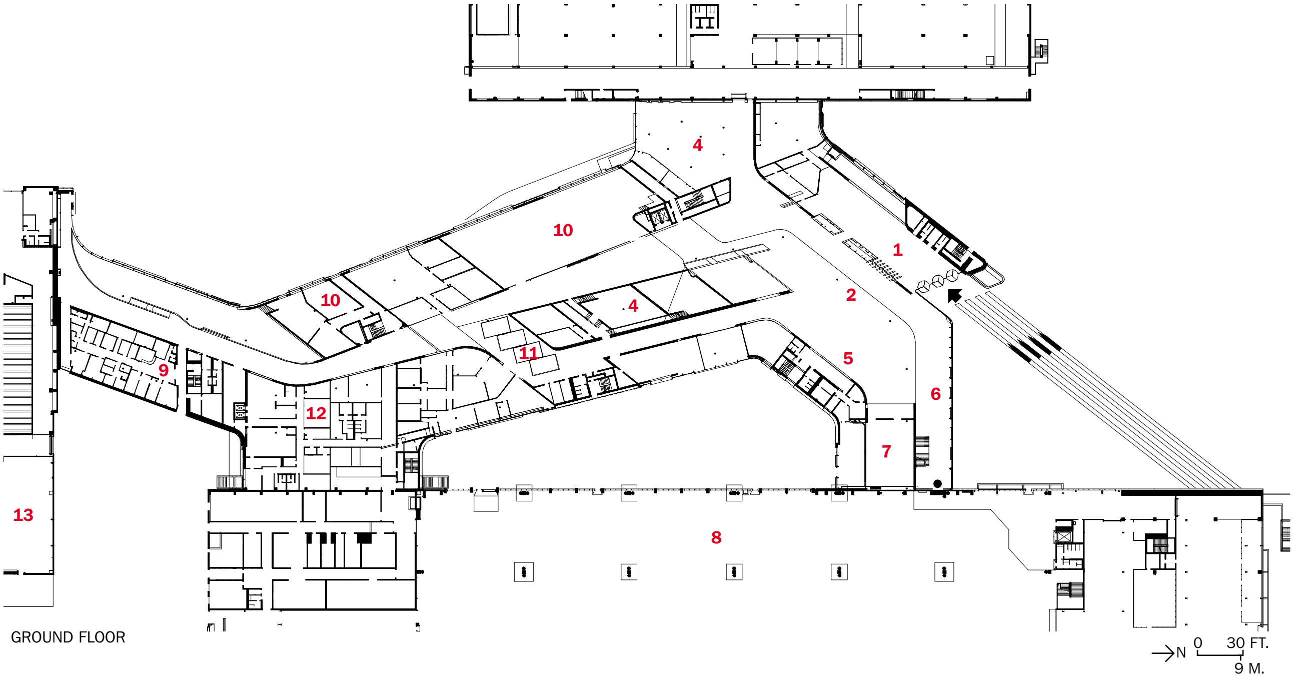
SECOND FLOOR

1. *Entry hall*
2. *Foyer*
3. *Paint shop*
4. *Offices*
5. *Café*
6. *Display*
7. *Auditorium*
8. *Chassis manufacture*
9. *Infirmary*
10. *Laboratory*
11. *Quality control*
12. *Kitchen*
13. *Assembly*
14. *Dining*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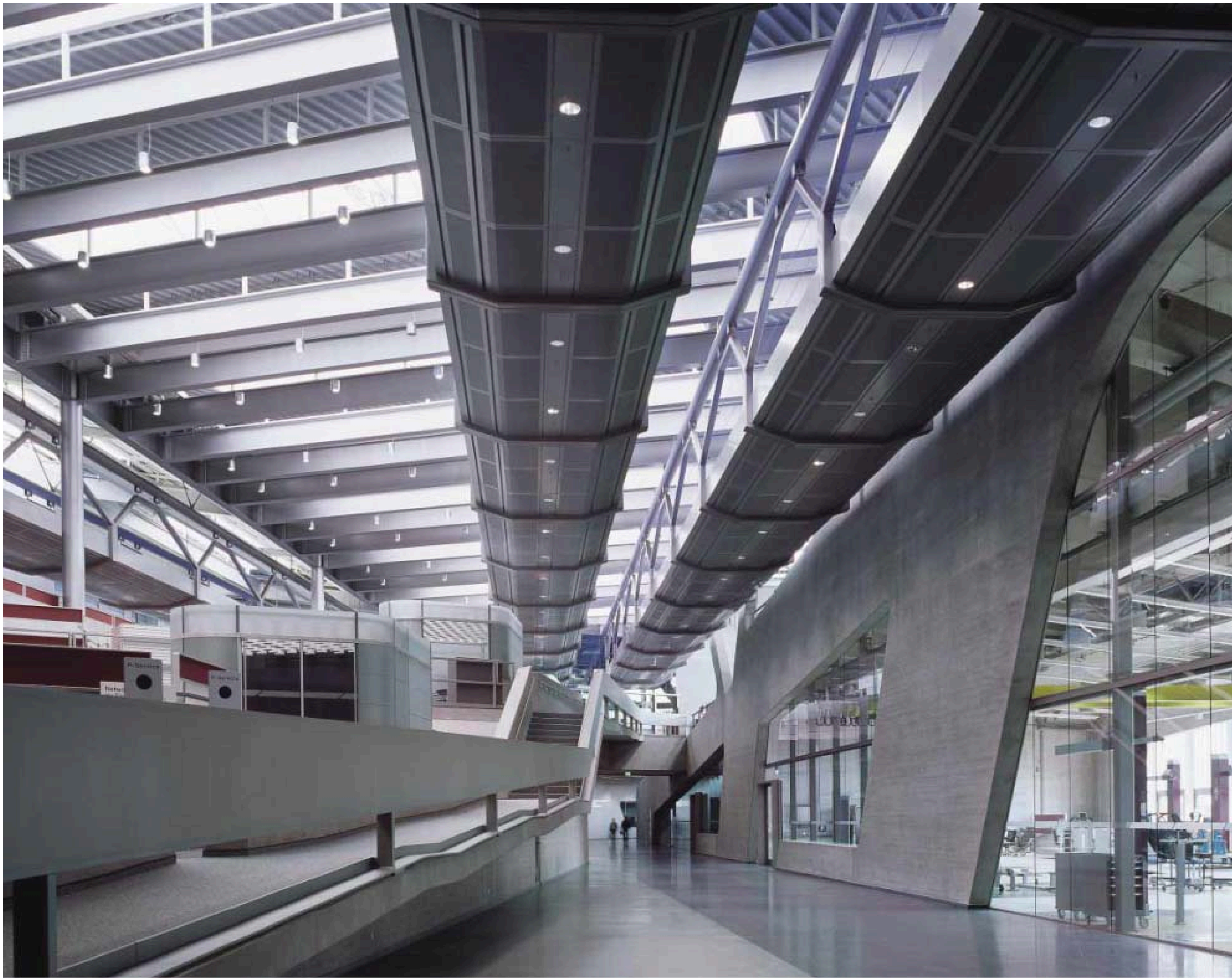
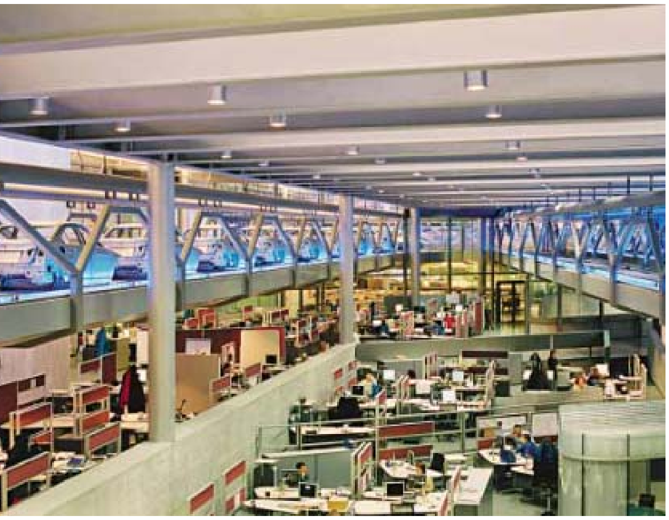
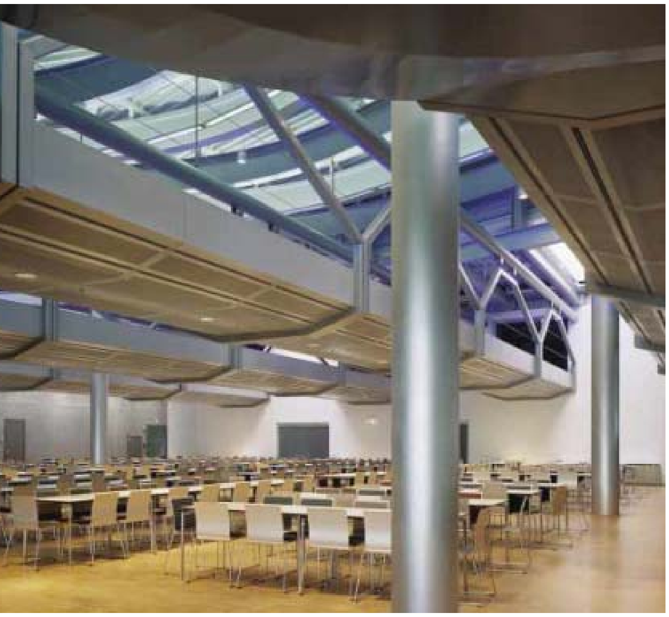
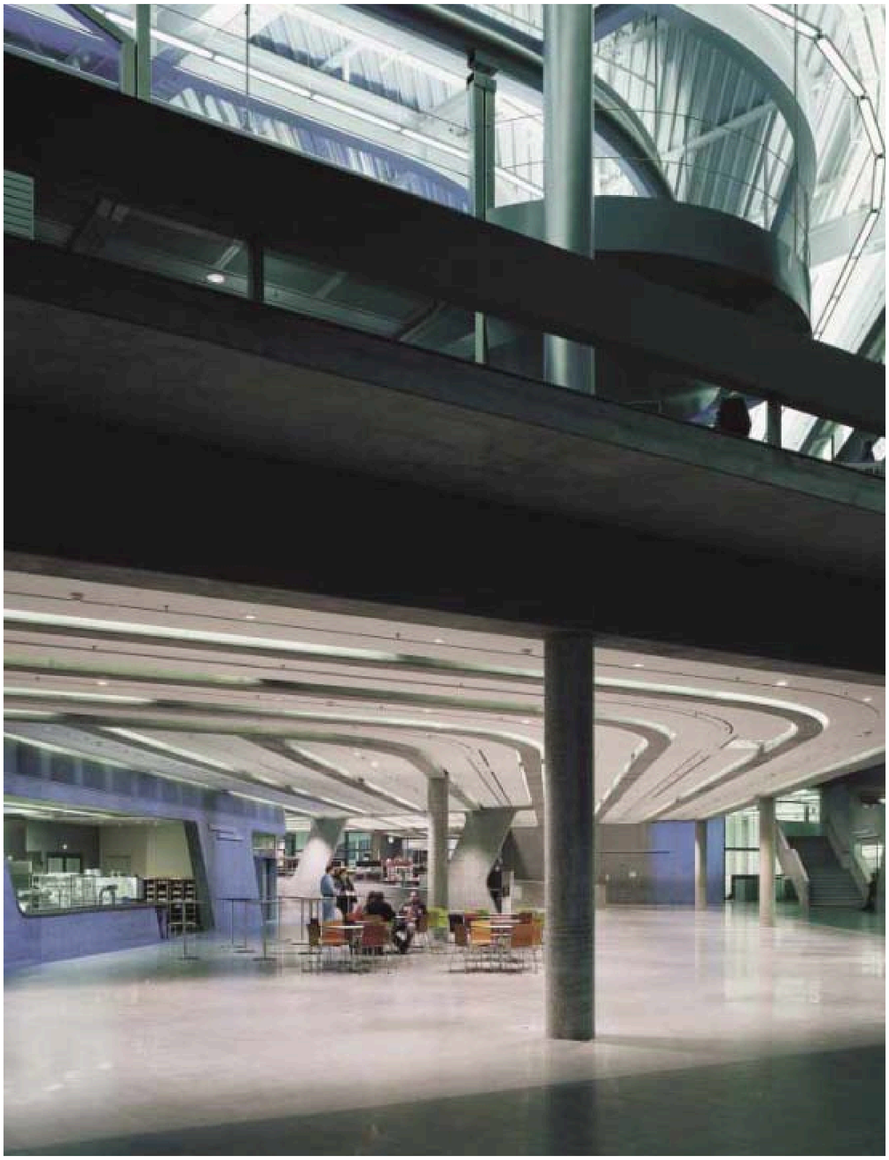
GROUND FLOOR

The building brings together production, administration, and research functions under one roof. The architects created an internal street with offices on one side cascading down a series of terraces and technical spaces on the other side (below). Views from offices and upper levels into other areas (right) help create an environment where working together is encouraged.









Unfinished car bodies, uplit in blue light, move along suspended beltways above office areas (top left) and even the employee cafeteria (above left). A small café sits near the building's main entry (right).

design would be "a nightmare. People said, 'It will be loud; it will smell. You won't be able to work with conveyors moving through the building.' There was a lot of anxiety and resistance to the project, but things changed quickly. We had to get rid of prejudices and learn how to use our new freedom," says Clausen. To those early skeptics, Clausen points out that the conveyor in the cafeteria that transports dirty dishes to the kitchen is louder than the belt that moves cars through the building.

Architect Matthias Sauerbruch, chair of the jury that picked Hadid's scheme over entries by Richard Rogers, Greg Lynn, Reiser + Umemoto, and others, suggests that the winning design is without typological precedent. "It's almost infrastructure," he says. "It's not just spatially exuberant; it's the project that most precisely fit the brief, which was very complicated."

BMW's investment in serious industrial architecture for the postindustrial era will continue. Next summer, the company will open BMW Welt, a mixed-use building designed by Coop Himelb(l)au located next to its Munich headquarters. But before then, the car company intends to open its Leipzig facility to the public; it anticipates about 50,000 visitors yearly.

Hadid's building proactively channels flows of occupancy, exchanges of information, and movements of auto bodies to shape a new, urbanized interior landscape of industrial production. As the architect says, "Industry always has to invent and innovate. In architecture, you also have to renew yourself constantly and try new things." The BMW Central Building may not break entirely new ground for Hadid—she acknowledges a longstanding interest in movement and admits to certain similarities with her upcoming museum in Rome—but it reflects the increasing clarity of her recurring design thinking. And it shows that her architecture not only looks good; it also performs well. ■

Credits (continued from page 84)

Landscape architect: *Gross. Max*

Engineers: *AGP Arge Gesamtplanung (structural, civil, m/e); Anthony Hunt Associates (structural); PMI (acoustic); Equation Lighting (lighting)*

Project manager: *ARGE Projektsteuerung*

Contractors

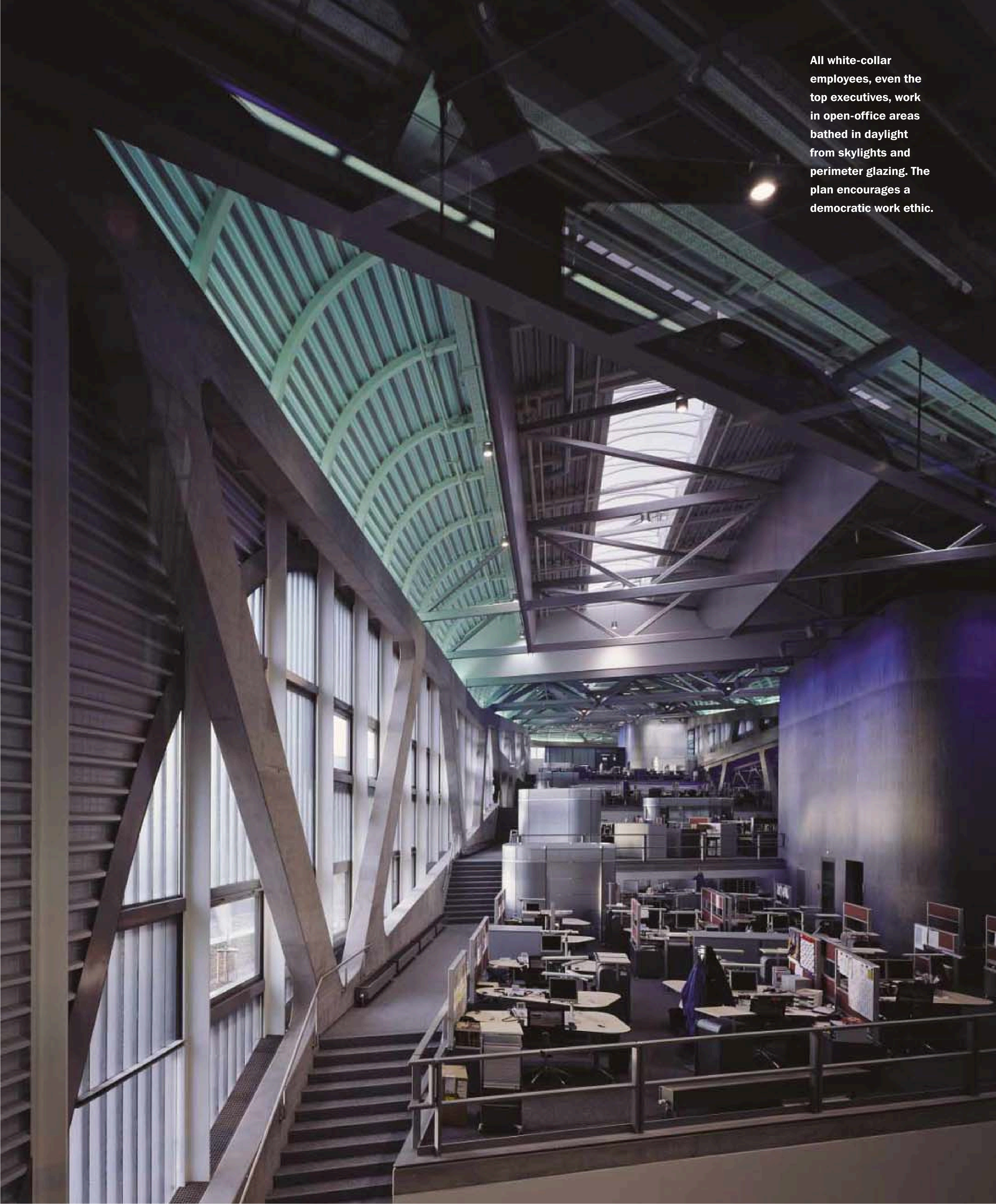
Steel: *Max Bögl Bauunternehmung*

Facade: *Radeburger Fensterbau*

Fit-out: *Jaeger Akustik*

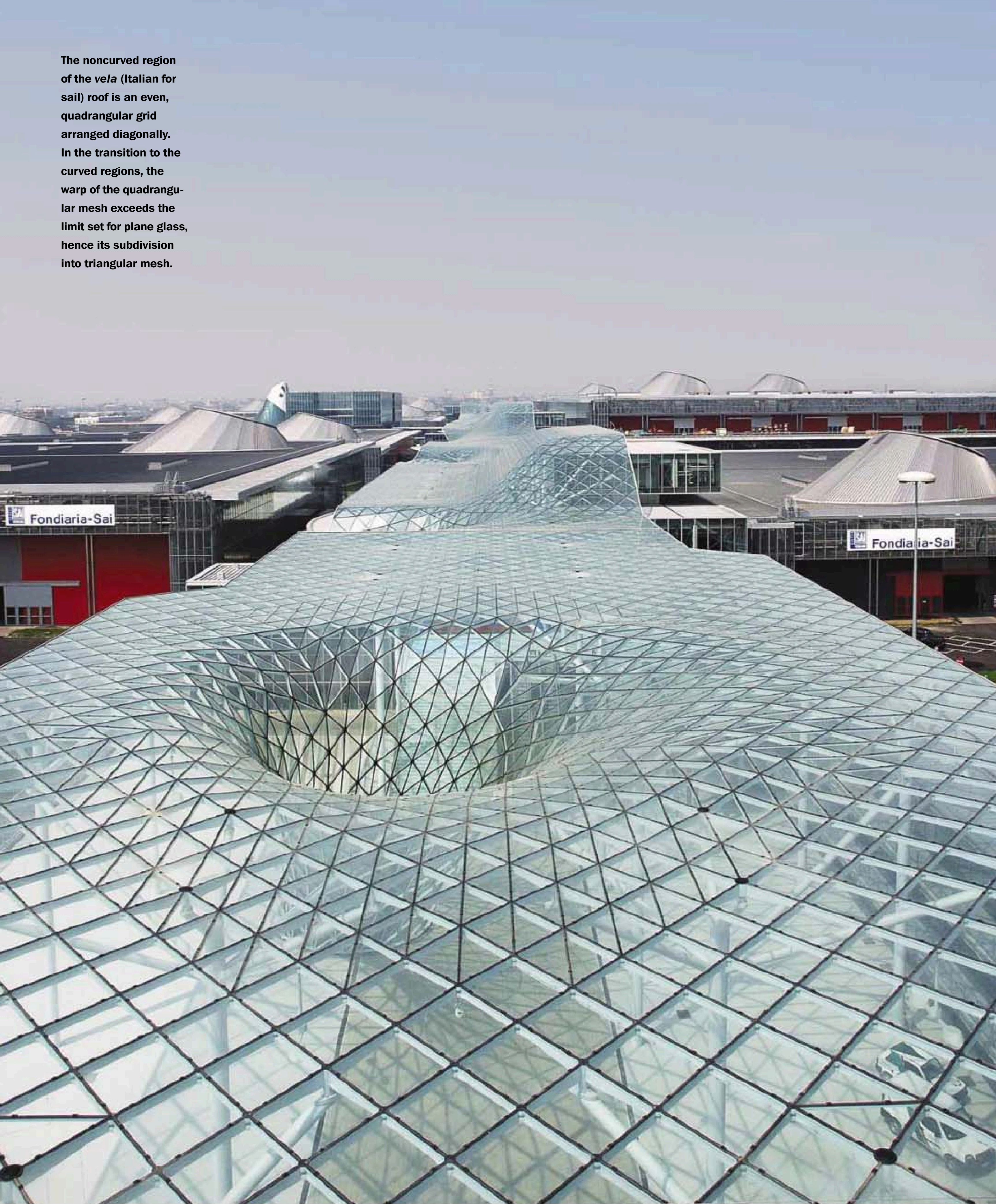
For more information on this project, go to Projects at **www.architecturalrecord.com**.

PHOTOGRAPHY: © BMW AG/MARTIN KLINDTWORTH (TOP LEFT); BMW AG/ERIK CHMIL (RIGHT); HELENE BINET (OPPOSITE)



All white-collar employees, even the top executives, work in open-office areas bathed in daylight from skylights and perimeter glazing. The plan encourages a democratic work ethic.

The noncurved region of the *vela* (Italian for sail) roof is an even, quadrangular grid arranged diagonally. In the transition to the curved regions, the warp of the quadrangular mesh exceeds the limit set for plane glass, hence its subdivision into triangular mesh.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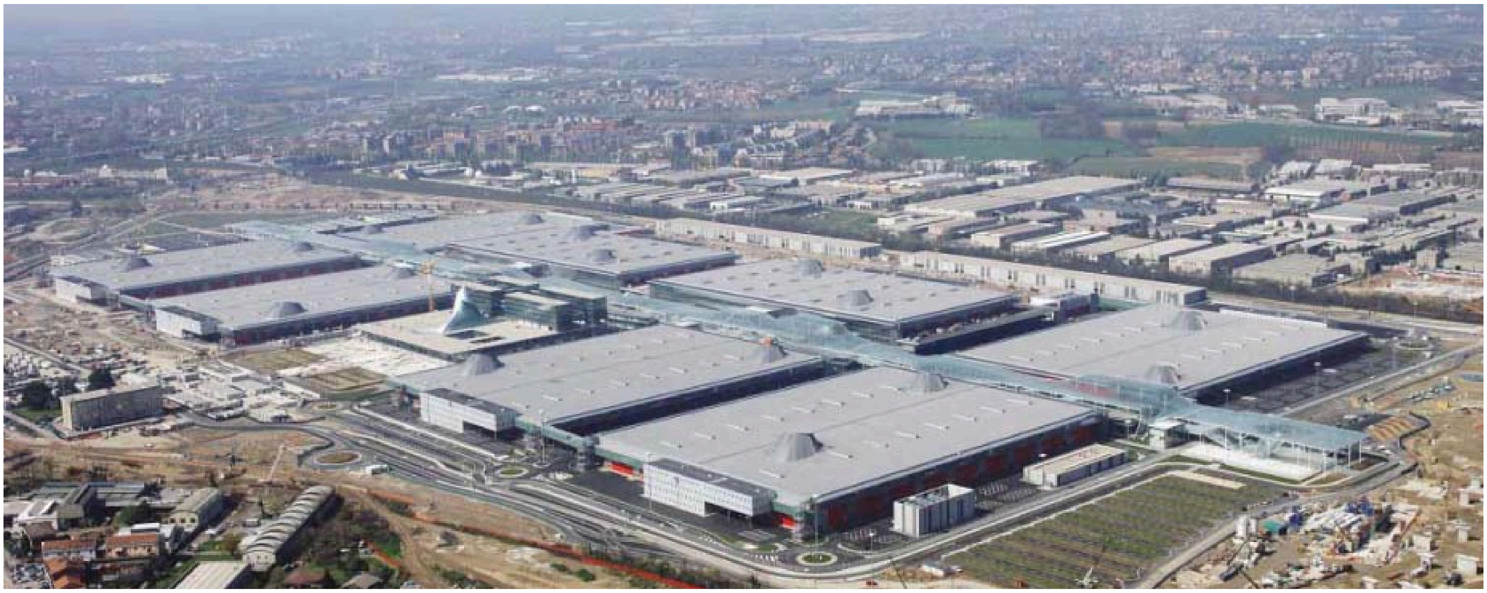
Fondiaria-Sai

Studio Fuksas drapes glass and steel as if it were fabric over its **MILAN TRADE FAIR**, a convention center for trade and fashion



PHOTOGRAPHY: © GIUSEPPE BLENGINI/STUDIO FUKSAS

By Paul Bennett

The entire peninsula of Italy is about the size of Arizona. Rome, its largest city, has fewer than three million people, and Milan about half that. More important, Italians are accustomed to small things: narrow streets, Fiat 500s, and demitasses of espresso. But something happened on the plateau between Milan and Turin this past year, and for several months Italy contained the largest construction site in the world.

The result was the Fiera di Milano, or the Milan Trade Fair, a mile-long exhibition fairground designed by Roman architect Massimiliano Fuksas. The Fiera covers 2.1 million square feet, provides 20,000 parking spaces and two-dozen restaurants, and by almost every measure stakes a legitimate claim to being called a megastructure.

"The new Fiera is not a building," says Fuksas. "It's too big. Some 50,000 people could live inside of it." Fuksas considers it "a city in itself." But it's not a city. The Fiera is a convention center, and so from the start Fuksas grappled with the critical challenge that confronts all overly large buildings of this sort: legibility. How does one design a place like this so that we don't find ourselves spinning around in mind-numbing circles, consumed, in a way, by the ongoing bigness of the place?

Fuksas dealt with this, first, by creating a strong central image for the building that continually draws the viewer's attention inward: a glass canopy that bisects the complex and loosely binds together its disparate elements. A waving, undulating gesture, this canopy—nicknamed *vela*, which is Italian for sail, by the workers—is composed of a steel-mesh armature divided into rhomboid and triangular nodes holding triangular glass panes. In addition to slender steel pillars, the roof is supported by vortexlike parabolas of glass and steel that give the impression that the canopy floats, only touching the earth here and there.

Like any glass house, the canopy reflects and refracts a tremendous amount of light and therefore creates a luminous glow that is visible everywhere, even in the darkest innards of the pavilion buildings. One always has a sense of where the center of the site is. An elevated, blue-tinted walkway that runs under the full length of the canopy feels ethereal, even cosmic, flooded in intense light and surrounded by waving glass.

Placed along this linear Main Street of glass and light are the buildings that actually house the complex's many activities. In order to make the entire ensemble seem coherent, Fuksas created a rigid architectural typology to demarcate each building's function. There are four types. The eight exhibition halls, where the bulk of the trade-show booths will be set up, are highly functional—one might call them industrial—warehouses. Large (530 by 730 feet) rectangular boxes with huge nozzlelike protrusions in their roofs, sheathed in polished steel, have orange facades facing the canopy: a burst of color in this otherwise airy space that makes them immediately recognizable. In the middle of the site, marked by a huge glass-and-steel cone, rests the "service center," which contains a main

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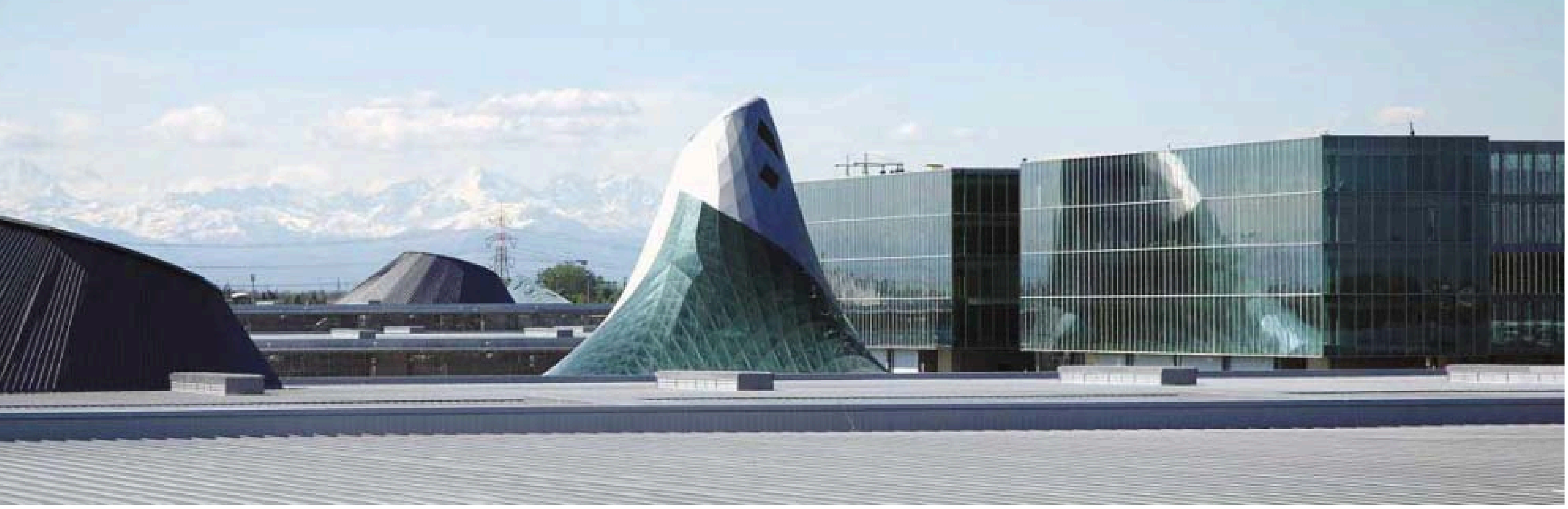
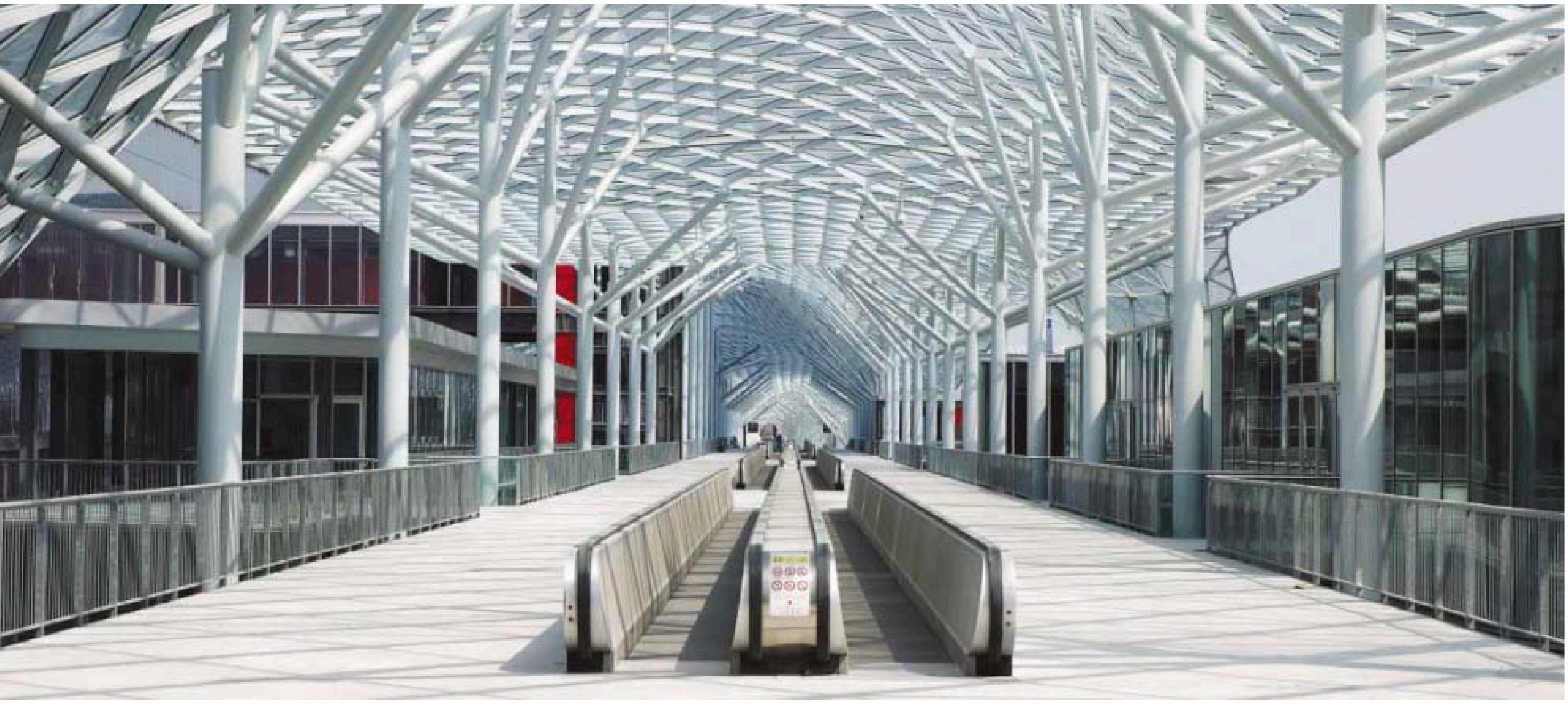
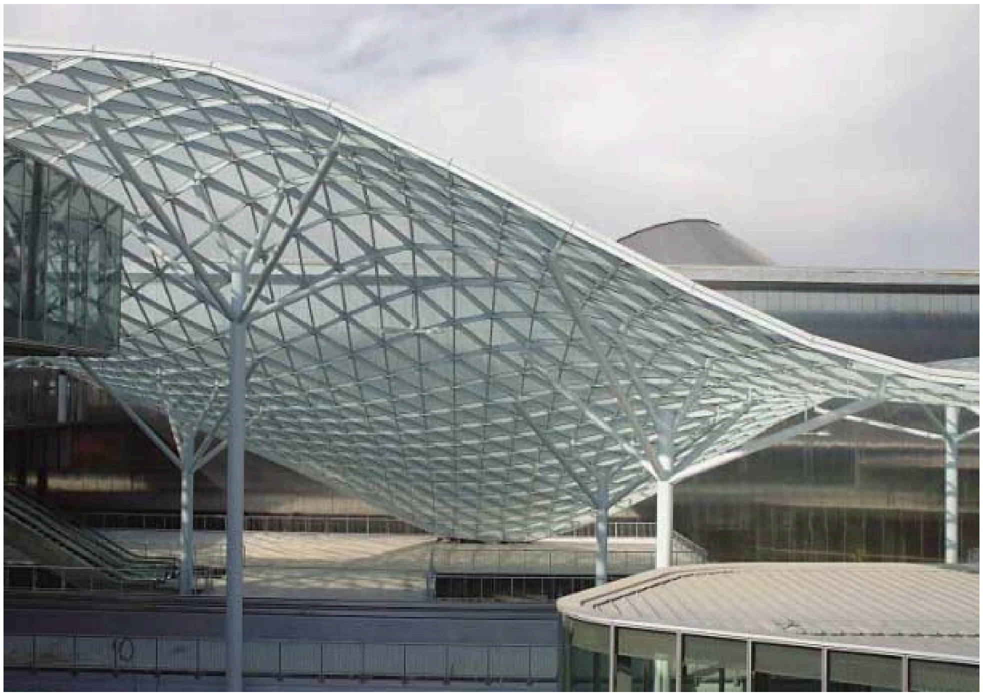
Project: *Milan Trade Fair, Italy*
Architect: *Studio Fuksas—Massimiliano Fuksas, principal; Doriana O. Mandrelli, art director; Giorgio Martocchia, Angelo Agostini, Ralf Bock, Giuseppe Blengini, project architects*
General contractors: *Astaldi; Vianini; Pizzarotti*
Structural engineer: *Schlaich Bergermann und Partner*

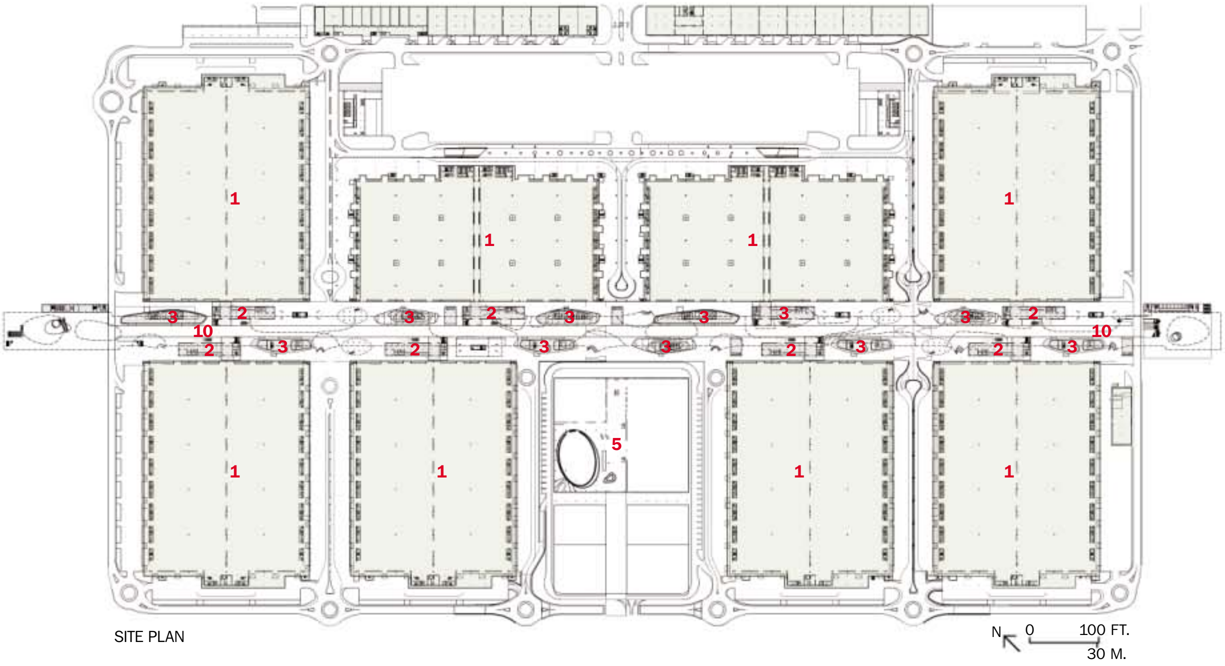
Paul Bennett, a Rome-based writer, is a former editor for Landscape Architecture *magazine.*







The center of the site is traversed by a nearly mile-long elevated walkway (left and above), covered by the canopy, which moves in and out of the trade fair's buildings, but never touches them. As a rule, tree columns, with six branches each, support the *vela* roof at regular intervals. The two inner branches serve as drainage. Occasionally, the glass-and-aluminum-clad canopy touches the ground in full- or half-volcanoes (section, opposite). In some cases, the canopy rests on the buildings underneath. The *logo* roof (top) marks the entrance to the trade fair.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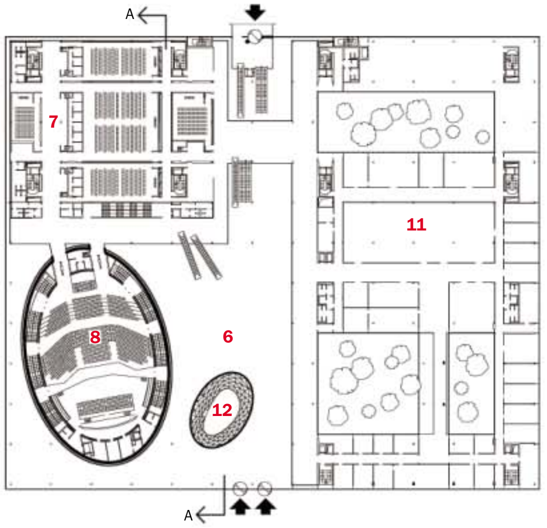
SITE PLAN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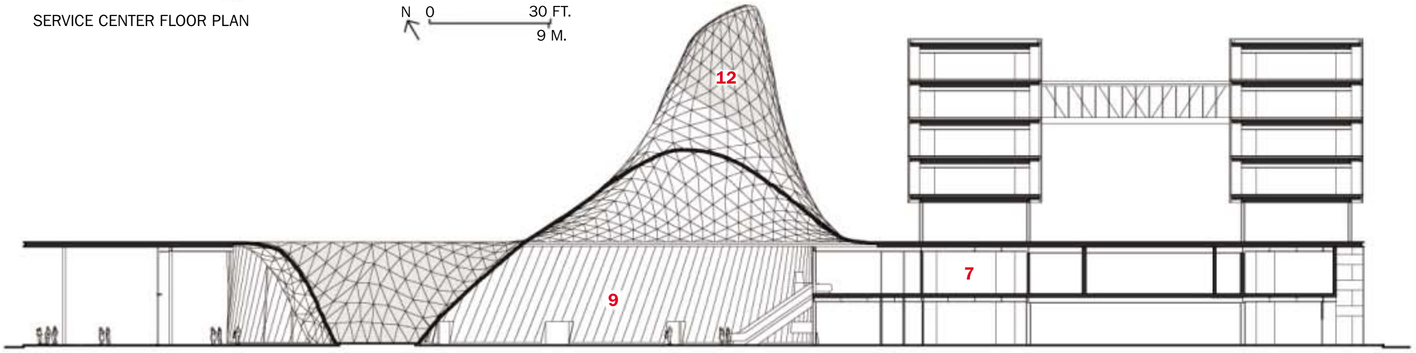
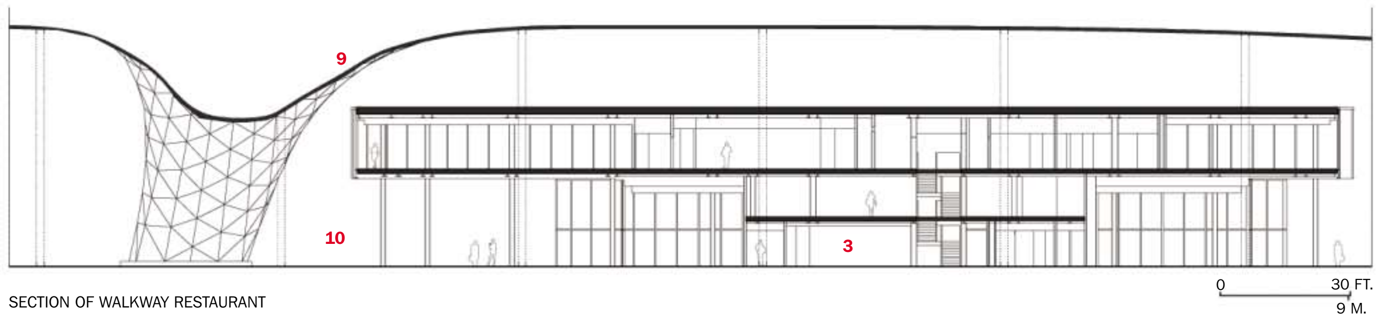
SERVICE CENTER FLOOR PLAN



SERVICE CENTER SECTION A-A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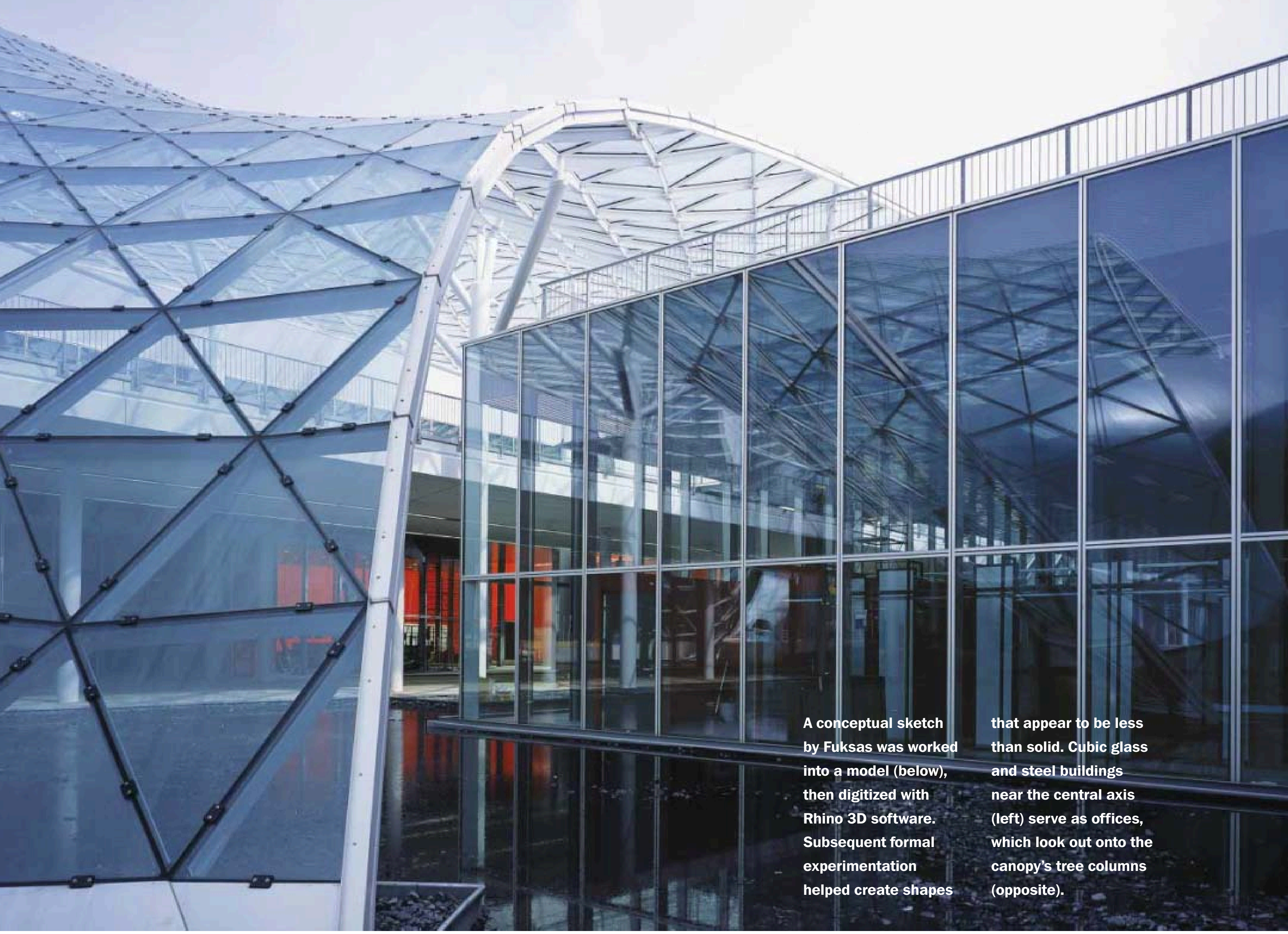
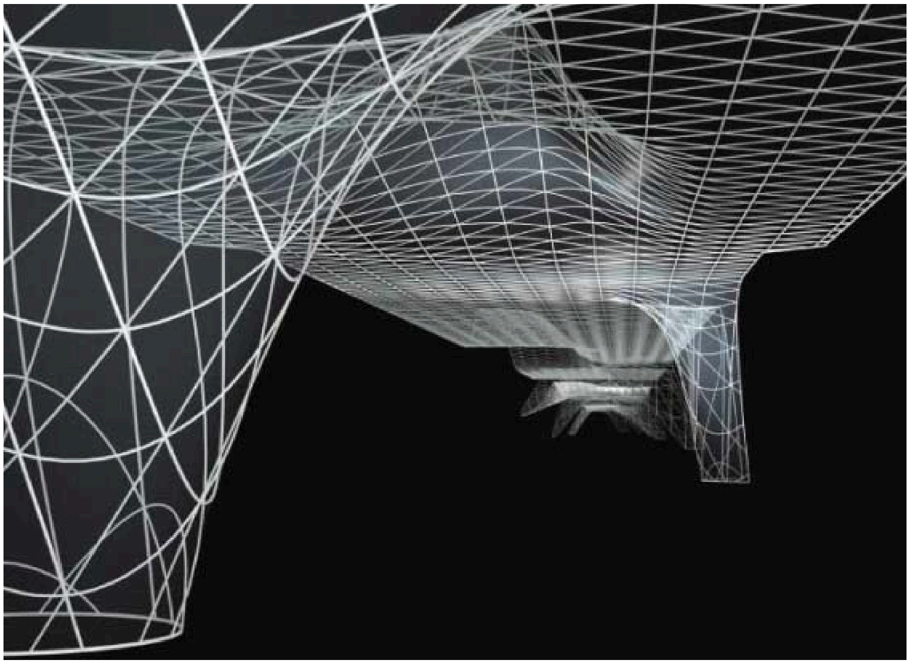
SECTION OF WALKWAY RESTAURANT

1. *Exhibition hall*
2. *Meeting space*
3. *Restaurant*
4. *Offices*
5. *Service center*
6. *Entrance hall*
7. *Conference room*
8. *Auditorium*
9. *Technical center*
10. *Canopy*
11. *Walkway*
12. *Entrance cone*



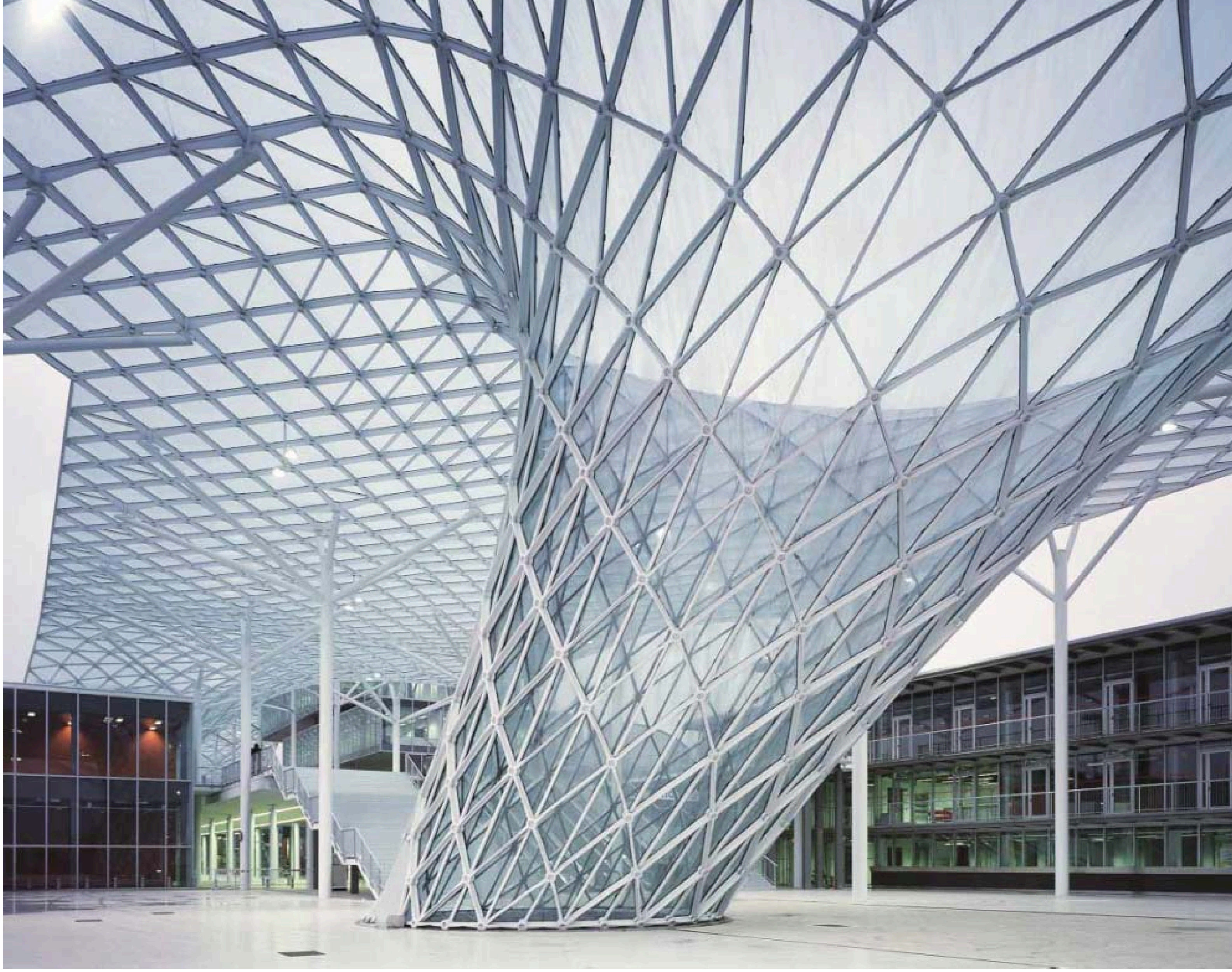
A conceptual sketch by Fuksas was worked into a model (below), then digitized with Rhino 3D software. Subsequent formal experimentation helped create shapes that appear to be less than solid. Cubic glass and steel buildings near the central axis (left) serve as offices, which look out onto the canopy's tree columns (opposite).



Grid topology and structural behavior of a free-formed glass surface

The so-called *logo* (Italian for symbol) is the section of the glass roof that marks the entrance to the fairgrounds, rising to 121 feet. The *vela* (sail) part of the roof links the individual halls over a length of 4,265 feet. It is divided into 12 regions, each about 328 feet long, with floating fix-points at the tree columns and stationary fix-points at the "turned-down volcanoes," or funnels, in order to control deformation due to temperature changes. The *logo* roof, which is mostly double-curved and completely free-form, calls for triangular meshing for efficient load-bearing behavior as a shell. Both the *logo* and *vela* structures consist basically of welded-steel profiles, with the individual structural elements prefabricated offsite. Most were bolted together, so little welding was required.

Source: International Journal of Space Structures, Vol. 20, No. 1, 2005.



entrance hall, an auditorium, a conference room, and technical rooms. Next come the 20 small restaurants and cafés that line the walkway. These steel-trussed glass structures with wavy facades stand on pillars so that they reach the walkway. The meeting halls, which are designed as small, Gehryesque stainless-steel-clad blobs, hover at walkway level. Office spaces for the Fiera administration, also spaced along the walk, are contained in simple glass and steel boxes.

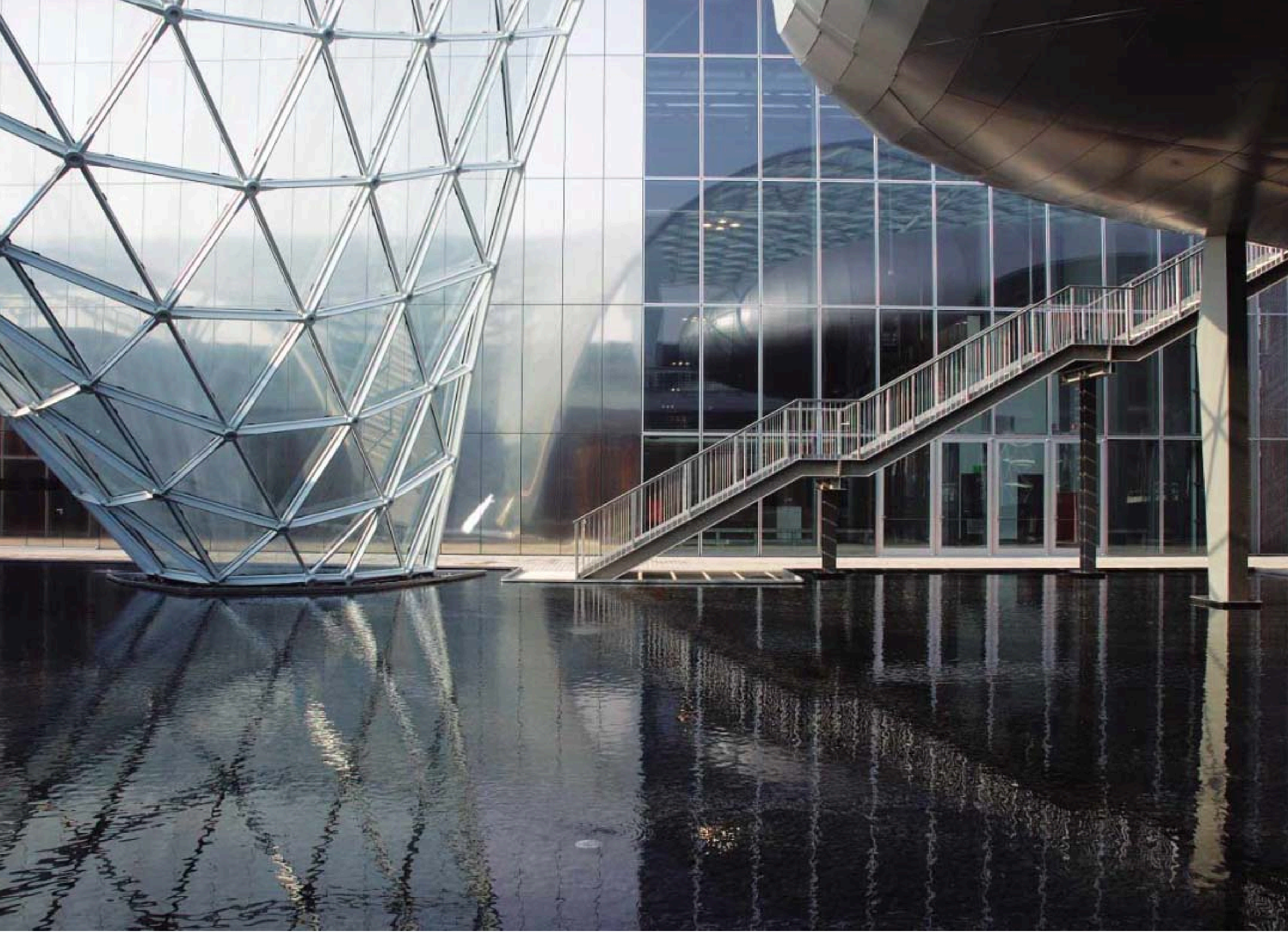
Below the walkway, at ground level, each building is given its own landscape treatment. The bloblike meeting halls get gravel-lined reflecting pools. The wavy restaurants get bamboo forests. The office buildings, green grass. The effect of this is to create a kind of fantastic wonderland of architecture and a space that is also coherent. You know at once whether you're looking at a restaurant or a pavilion. And although the building overwhelms with its scale—the vista down the walkway is a bit frightening in its awesome size—it is easily understandable.

Fuksas confers legibility to the trade-fair structure through the scale and orientation of the buildings. With the exception of a few minor piazzas that eddy off the walkway, everything in the Fiera is oriented toward the canopy, the main axis and a kind of Main Street. The structures placed directly on the walkway (the restaurants and meeting halls) are small, while those set slightly back from it (the pavilions) are much larger.

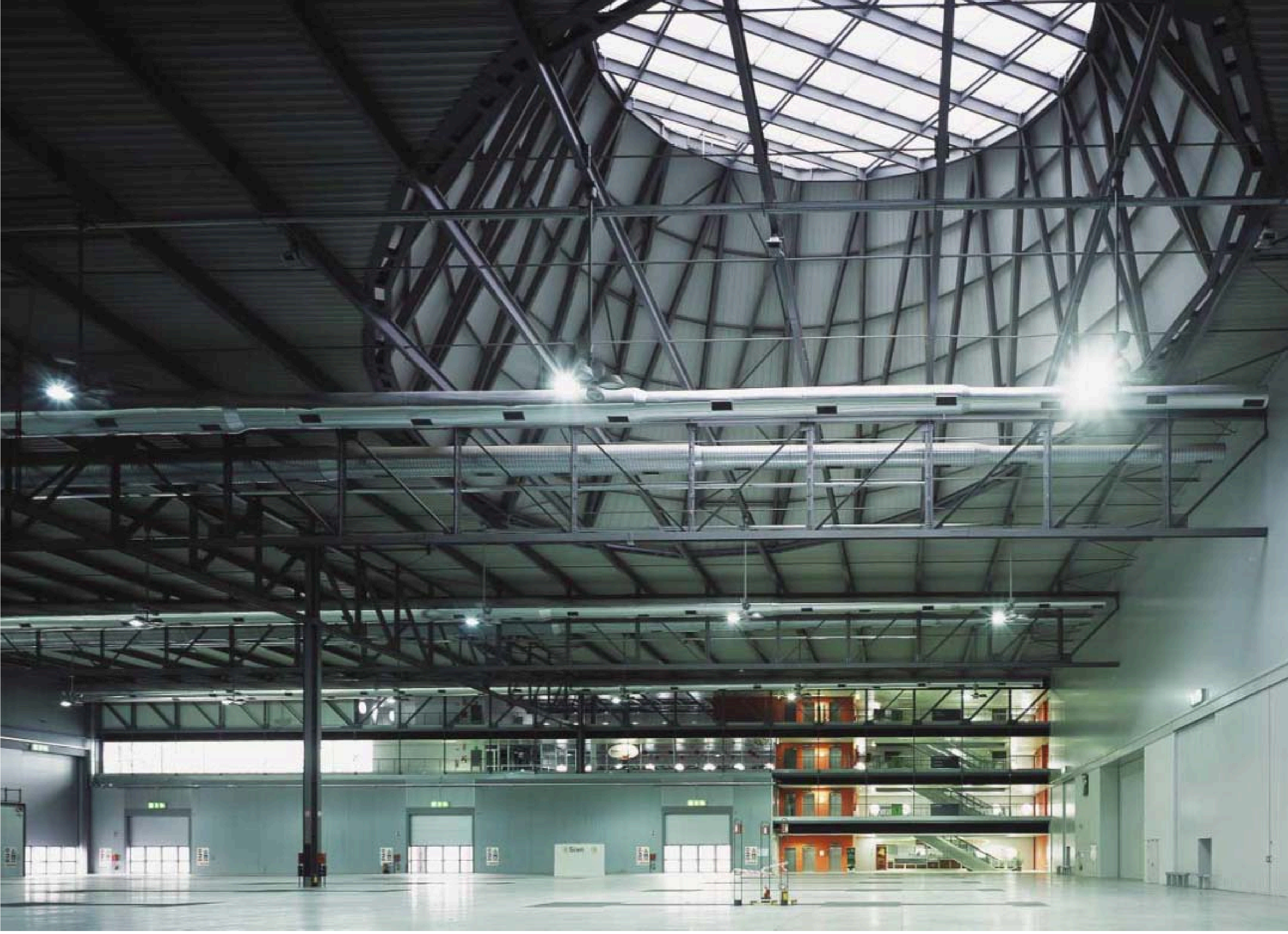
One advantage that Fuksas enjoys here is the lower value placed on air-conditioning in Italy, which allows him to arrange all these elements not inside a closed space—where they would seem very contrived—but in an open-air landscape. The freestanding canopy never joins any of the buildings, and as it jiggles and wriggles across the site, it creates a thousand different, beguiling intersections between architectural and sculptural form.

The Fiera began life nearly a decade ago when the city of Milan realized that despite the cultural importance of the conventions and exhibitions that it hosted in its fairgrounds—including the yearly furniture show—the city was being rapidly outpaced by others like Chicago and Frankfurt in the global competition for large-scale trade shows. At the same time, the European Union was looking to invest in a brownfields cleanup project in the industrial and postindustrial suburban megalopolis that extends 77 miles from Milan to Turin. The E.U. agreed to clean up a former AGIP gas refinery near a primary highway intersection connecting eastern and western Italy to the northern reaches of Europe if the city would build a $700 million trade-show complex on the space. The cleanup took just over a year and involved substantial removal and chemical cleaning of the soil, before Fuksas was tapped for the design.

According to Giuseppe Blengini, an on-site project architect, the design of the Fiera followed the same process that all of the firm's



Each building is given its own landscape treatment at ground level: Blob meeting halls get gravel-lined reflecting pools (above); the wavy restaurants get bamboo forests; the elevated office buildings, green grass (right). Convention pavilions (opposite) are large (530 x 730 feet) rectangular boxes clothed in polished steel, with generous openings to admit natural light.



projects undergo. It began as a rough, conceptual sketch by Fuksas himself. In this case, the inspiration came from the local landscape, a melange of natural elements (a stream meandering through plains) and some unnatural ones, including a "mountain of steel," emblematic of northern Italy's industrial landscape. This sketch was worked into a model, which was then digitized using Rhino 3D modeling software, a program favored by industrial designers and conducive to sculptural work. Blengini says that the back-and-forth between sketch, model, and computer was repeated dozens of times, with the ever-present Fuksas honing certain details.

Although it looks very complex, the canopy's use of standardized triangular glazing for most of its span made it relatively easy to construct. The entire project was completed in 27 months, lightning-fast in Italian terms. "Making the canopy was the easy part. After the first 328 feet, we went fast," says Fuksas. "The hard part was the vision. The scale is so immense that we never fully comprehended the project until it was done."

A building like the Fiera may never become lovable like so many classic structures of smaller scale. Even a skyscraper has a certain intimacy to it compared with a nearly mile-long exhibition hall in the suburbs. But in the face of this challenge, Fuksas has made a significant contribution, creating a space that is full of wonder. You half expect to see St. Peter at the end of that walkway when you arrive. But it's also comprehensible and, therefore, usable. It gives trade-show goers a much needed respite from the inhumane landscape characteristic of these shows—the miles of cardboard displays, bitter coffee, and bad-joke soliciting that leave one drained after minutes. All along the walkway we find amazing spaces where a building comes close to the canopy in a beguiling dance of unusual geometries or where a vista opens below us of a stainless-steel blob hovering over a reflecting pool bathed in milky light. These are sublimely architectural moments when form, volume, and light offer to lift us out of the banality of the show we might be attending and remind us once again that sometimes buildings can be something more than just the containers of our lives. ■

Sources

Glass roof (central axis, service center): *MERO GmbH*

Curtain walls: *Permasteelisa*

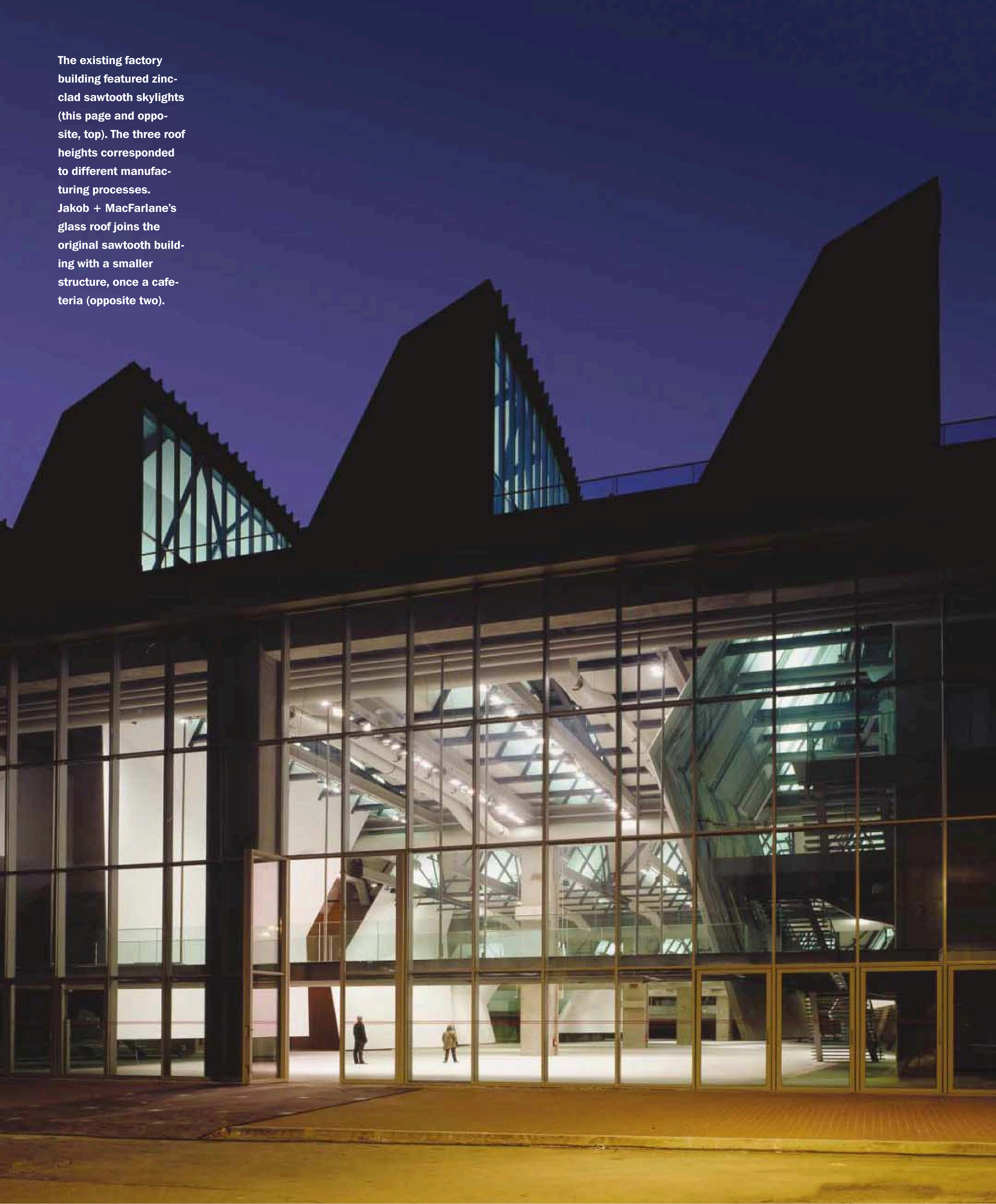
Steel structure: *Icom Engineering; Ask Romein; Carpentieri d'Italia*

Roof components: *Bemo Systems*

Lighting system: *Lampada Lavinia, by Doriana and Massimiliano Fuksas for Guzzini*

For more information on this project, go to Projects at **www.architecturalrecord.com**.

The existing factory building featured zinc-clad sawtooth skylights (this page and opposite, top). The three roof heights corresponded to different manufacturing processes. Jakob + MacFarlane's glass roof joins the original sawtooth building with a smaller structure, once a cafeteria (opposite two).



Jakob + MacFarlane transforms an existing shed, erected for a factory complex, into the vibrant **RENAULT SQUARE COM** communications center

By Philip Jodidio

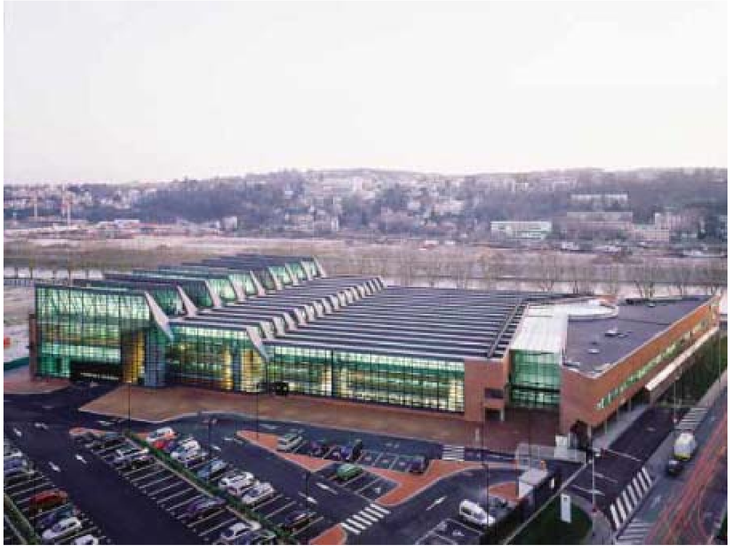
Designed as a prototypical manufacturing building for the Renault automobile company, Métal 57 was nearly obsolete by the time it reached completion in 1984. Automotive technologies had not changed radically during the construction period, but major structural changes in the company had rendered the vast, brick-clad shed near Paris useless to Renault as a factory. So, Métal 57—intended for the fabrication of metal car parts—never operated as a plant, but idled as a warehouse and ad hoc location for car sales to firm employees. Over the years, the building stood at the center of various transformation proposals and even faced the threat of demolition. Then, nearly two decades later, the Parisian firm of Jakob + MacFarlane won a competition to turn the structure into Renault's corporate communications center. This recently completed project has finally revved Métal 57 back to life.

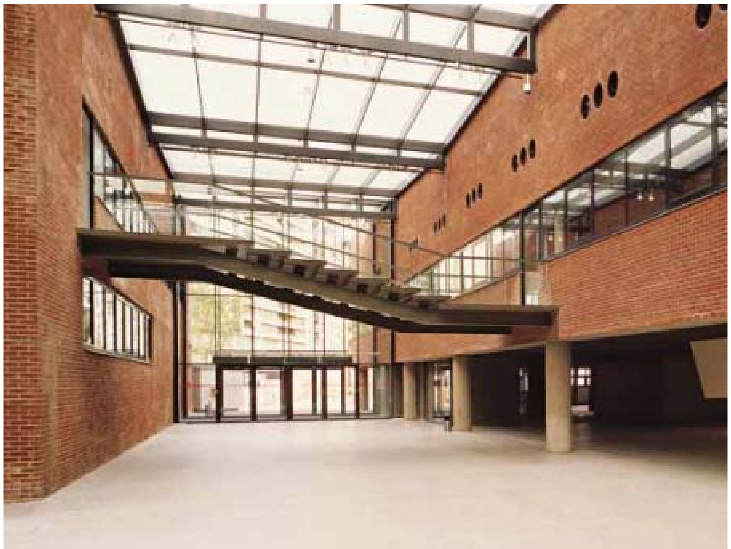
But the story of this building—going well beyond its brick walls and great sawtooth roof—remains inseparable from the history of Renault: its humble beginnings on Séguin Island, in Boulogne-Billancourt, at Paris's western extremity, and the factory complex that grew there. Séguin Island holds a particular place in French industrial folklore. There, in 1898, automobile pioneer Louis Renault founded the firm that still bears his name. By the mid-20th century, design and manufacturing operations, as well as administrative headquarters, occupied 154 acres—22 on the island, and the rest opposite it on the Seine's Right Bank.

With buildings mostly from the 1920s, '30s, '40s, and '50s, the complex grew like a small town. By the early 1980s, the company launched an ambitious program to replace all its aging structures with state-of-the-art facilities—and granted architect Claude Vasconi the commission to supplant the existing buildings with a scheme for about 20 new ones. But this renewal campaign would soon collide with a period of turbulence and upheaval. As the firm struggled through debilitating strikes, it also seized on the idea of decentralization, a trend then emerging across the manufacturing sector.

Just as Métal 57 reached completion, on the Seine's Right Bank, Renault moved its research and prototyping operations to Guyancourt, near Versailles—and later relocated its industrial manufacturing processes to western France. In 1984, the entire renewal project came to a halt, leaving Vasconi with just one structure on the site. Winner of the Grand Prix National d'Architecture, the 156,000-square-foot Métal 57 featured

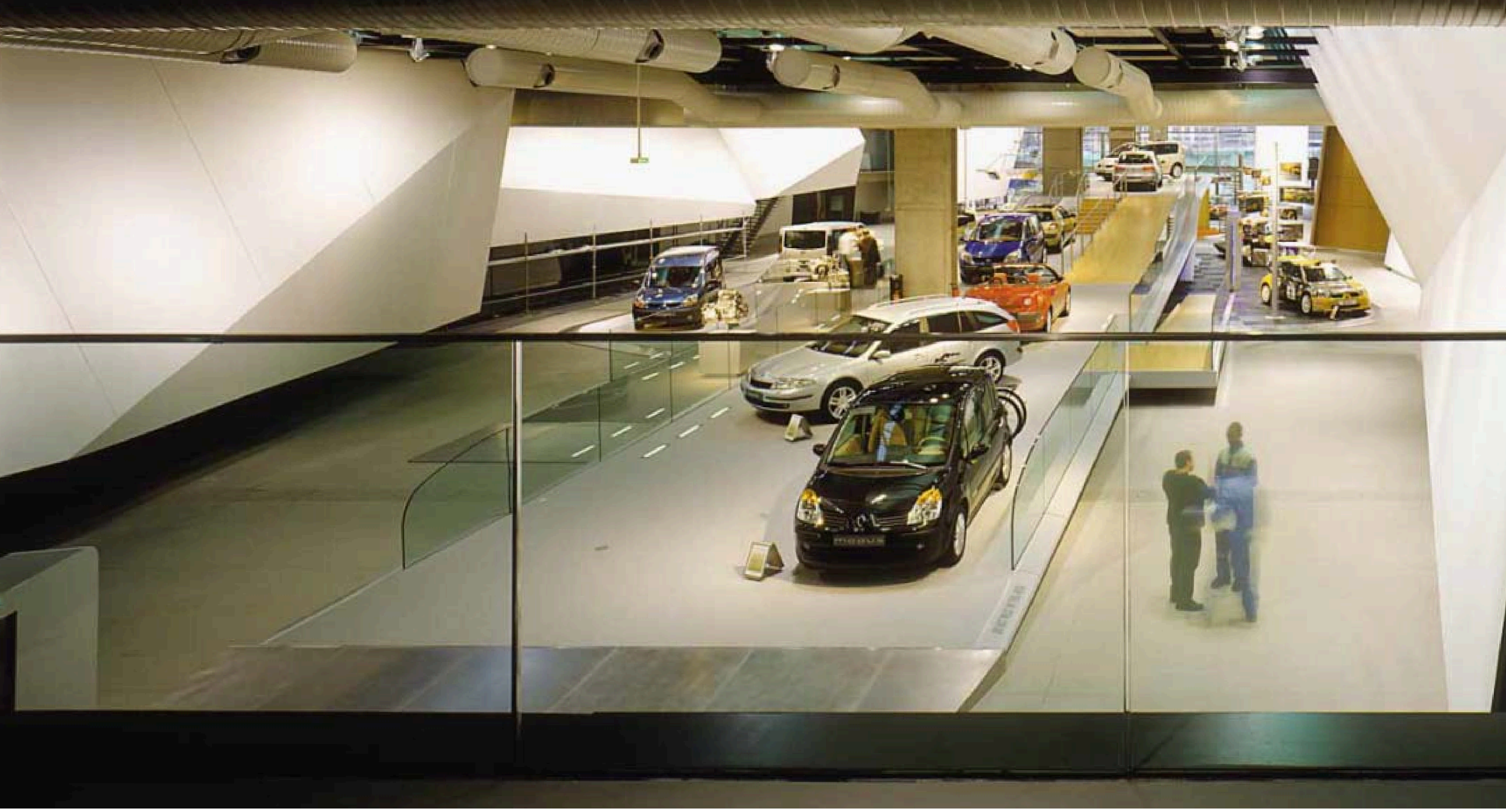
Philip Jodidio, a Paris-based journalist, has written many books on architecture.

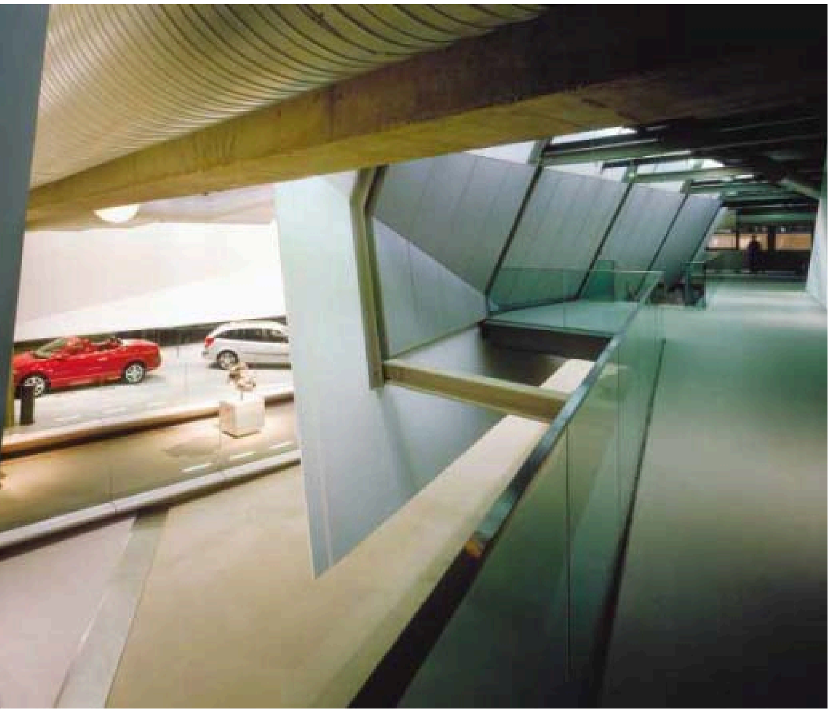




Project: *Renault Square Com, Boulogne-Billancourt, France*
Architect: *Jakob + MacFarlane—Dominique Jakob, Brendan MacFarlane, principals; Patrice Gardera, project architect; Sébastien Gamelin, Christian Lahoude, Petra Maier, Jean-Jacques Hubert, Antoine Santiard, Antoine Lacoste, Andrei Svetzuk, Oliver Page, Eric Page, project team*
Sources
Hardware: *d line; Dorma*
Acoustic fabric: *Texaa*
Plumbing fixtures: *Duravit (toilets); Corian (custom sinks by architects)*

PHOTOGRAPHY: © JEAN-MARIE MONTHIERS, EXCEPT AS NOTED; NICOLAS BOREL (BOTTOM)





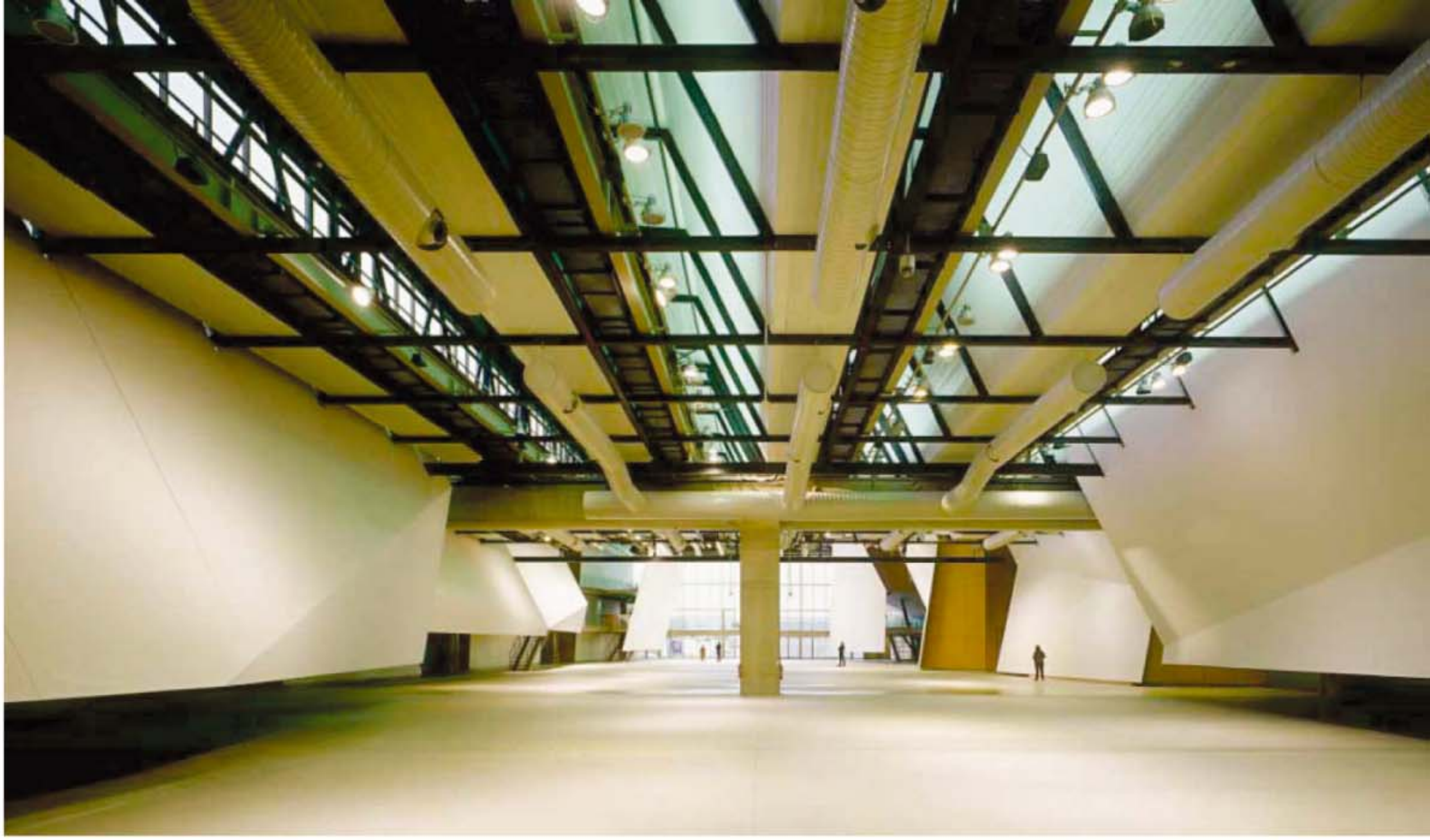
“Pleated” walls (top and above, and opposite) provide backdrops for displaying cars. These folded planes also become screens for projected words and texts. And certain walls are structured to hold an automobile mounted on display. The original factory gantry helps move cars, and ground-level exhibition areas facilitate driving in and out.

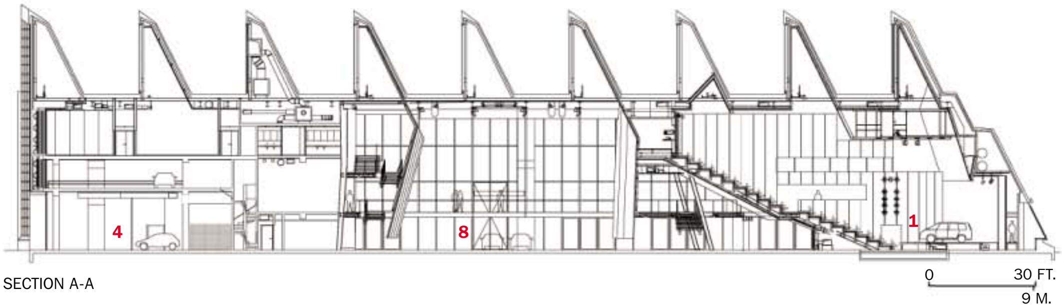
zinc-clad skylights, steel trusses, large concrete beams and pillars, a rolling gantry, and a progression of three ceiling heights—ascending from 6 to 9 to 12 meters (approximately 10 to 20 to 30 feet)—corresponding to different production processes.

But seven years later, Renault closed the factory. Its directors deemed the aging structures too costly to replace and the prospect of running a plant so near a major city too complex. Since then, schemes to convert or refurbish Métal 57, and the rest of the site, have included a government proposal for welfare housing and scientific facilities to occupy the full 154 acres. A master plan by Renzo Piano and landscape architect Alexandre Chemetov called for preserving most of the existing structures, while a later scheme catered to local politicians eager to raze the factories. Finally, architect Jean Nouvel published a vitriolic letter in *Le Monde*, defending the industrial architecture and forcing all concerned to reevaluate. The politicians then announced the rescue of some of the factory structures—“the memory of France’s working class”—Métal 57 in particular.

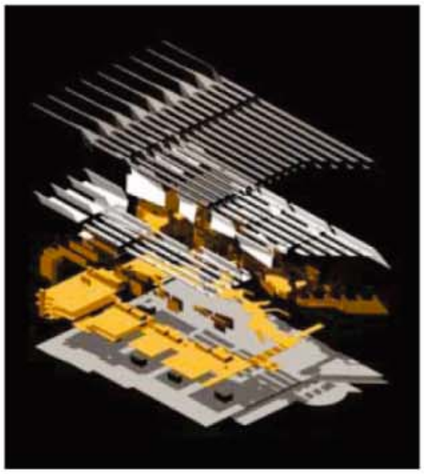
Renault had begun selling parts of the complex in the late 1990s: first, the upstream tip of Séguin Island to businessman François Pinault, and then another tract to the city of Boulogne-Billancourt. In 2001, Pinault chose Tadao Ando to build a contemporary art center directly across the river from Métal 57, but bureaucratic delays, he says, led him to cancel the project in 2005.

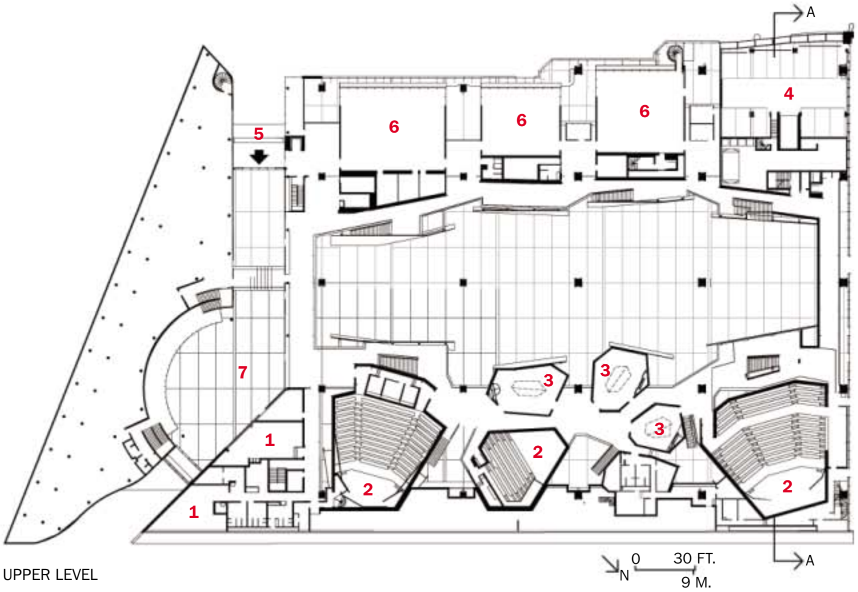
In 2001, Renault held a competition to convert Métal 57 into a corporate communications center. The jury, including Claude Vasconi, selected Jakob + MacFarlane, best known for their Georges Restaurant [RECORD, September 2000, page 128] atop the Pompidou Center. Renault’s directors envisioned the center as a base for its public relations staff of 250 to 300 people, as well as a place to present new cars to the press and automobile industry leaders and to invite the firm’s marketing groups from around the world. It would be a venue for meetings, entertainment, dining, and other events showcasing Renault cars—complete with a garage





SECTION A-A

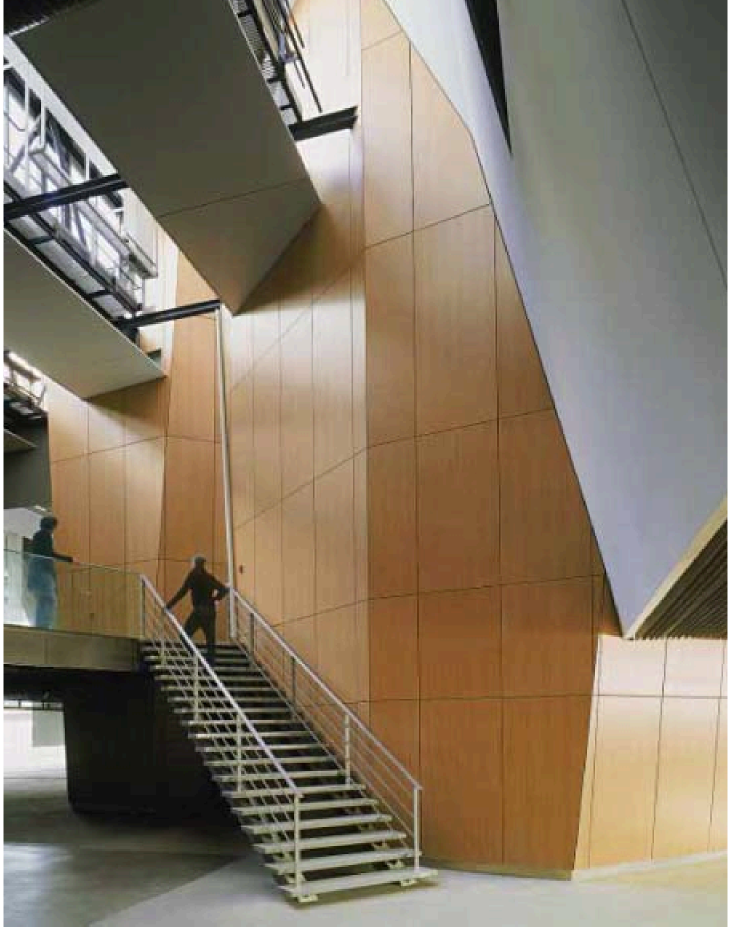


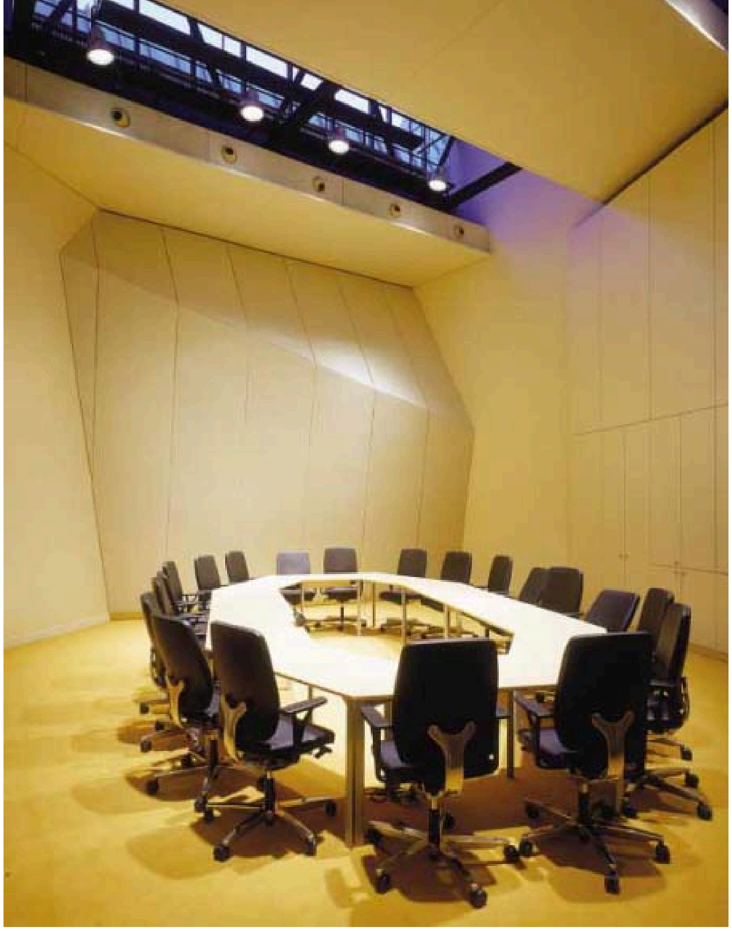


UPPER LEVEL

1. *Offices*
2. *Theater*
3. *Meeting*
4. *Parking*
5. *Entry (below)*
6. *Seminar*
7. *Entrance atrium (below)*
8. *Exhibition*

The interior was conceived as a series of inserted elements (above). Enclosed meeting rooms and auditoriums (in yellow) are objectlike, with skylights, at three levels, above them. "Pleated" walls (in white) run east–west, while wood (in brown) cladding the enclosed volumes runs primarily north–south.





housing the latest test-drive vehicles. The brief called for three auditoriums, seating 500, 300, and 100 people, respectively; 40,800 square feet of exhibition space; seven flexible seminar rooms; a pressroom; and offices—all in the vast shed. The entire ground level, including the auditorium stages, had to remain accessible to cars exhibited in the building, and the exterior had to stay essentially unchanged. The architects were later permitted, however, to add a glass wall at one end of the structure and a glazed atrium at the other, where their small upper-level footbridge connects the main building to the former employee cafeteria (now offices).

Completed in 2005 for $27.5 million, the conversion successfully creates open, airy spaces ideally suited to showing cars. Three-inch-thick, structural honeycomb panels, faced in resin-coated aluminum, partially line the vast exhibition area. With exposed steel frames backing bent white walls, the architects created display panels against which automobiles could hang like artworks. As MacFarlane points out, "the wall material, made for aeronautics-industry fuselages, is interestingly flat and light." Suspended from overhead steel trusses, these folded planes, which he describes as "pleated," take on geometries generated by the sawtooth roof's 60-degree angles. Some walls will provide backdrops for image and text projections. "The whole interior can be transformed into a fantastic machine for exhibitions," says MacFarlane, "a cinematic landscape of moving information."

The architects kept Métal 57's mobile gantry cranes, now used for lifting vehicles onto display walls. Jakob + MacFarlane also introduced a series of steel beams, amid the skylights, that not only hold light fixtures, but can also carry the weight of cars suspended in space like hanging mobiles. The inclined display walls lining the exhibition area seem to hover above the floor, distinguishing themselves—like the other interventions—from the existing structure. Underscoring the architecture's industrial origin, Vasconi's concrete portals remain visible in the main hall. In the dialogue between old and new, says MacFarlane, "we consciously stepped back—letting the car be the primary object of desire."

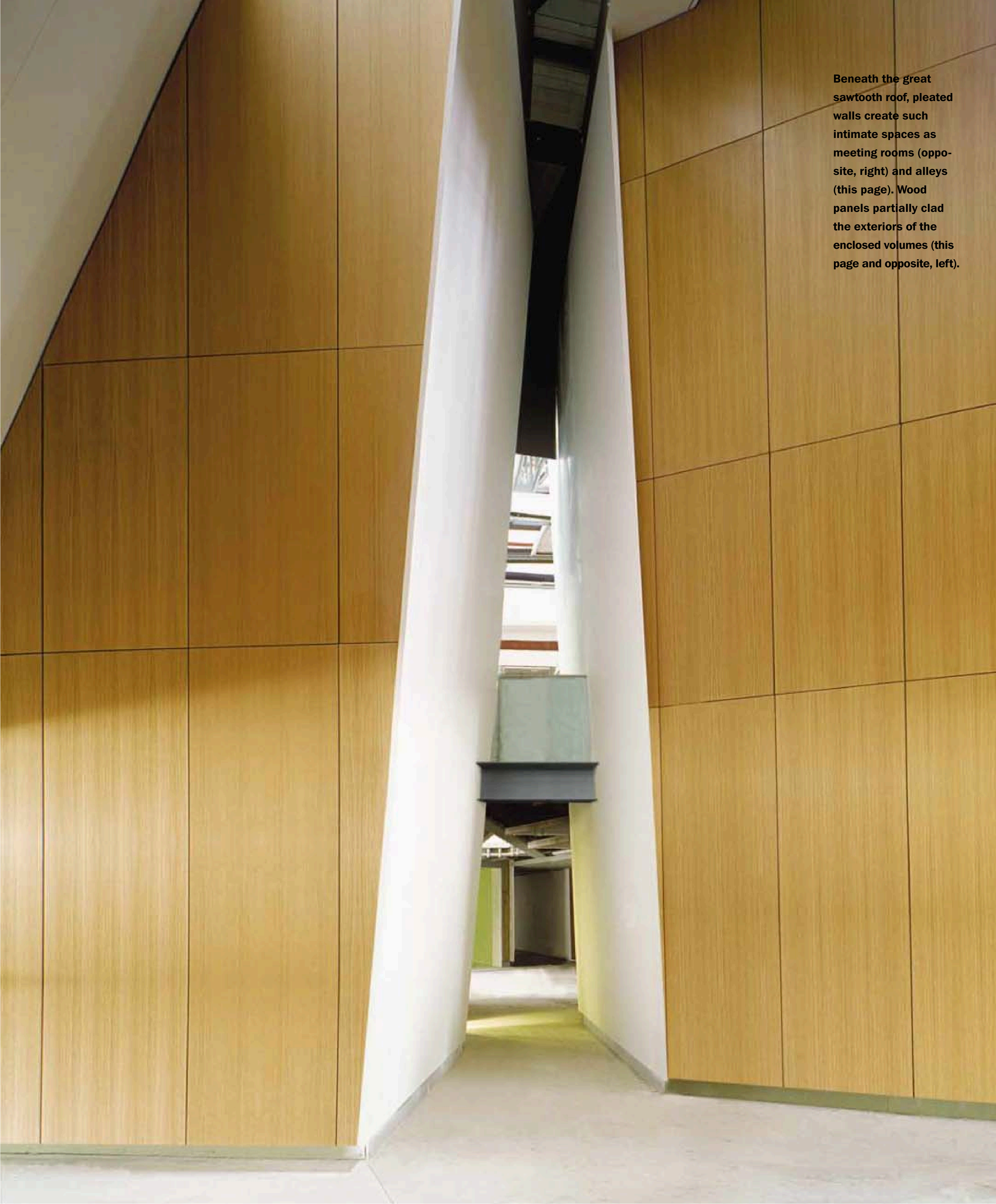
On one side of the east–west exhibition axis are the auditoriums and press facilities, with the offices, seminar rooms, and a 35-car test garage clustered on the opposite side. Wood wall surfaces and carpeting—ranging from ocher to burgundy, giving each inner space a unique identity—impart a sense of warmth. But at the same time, lateral openings in passageways, stairways, and bridges permit views into the main space, creating a complex urban unity. Within the great shed's interior "cityscape," the auditoriums and meeting rooms become small, freestanding buildings in their own right.

The original idea was to open the space to the public a few times a year for exhibitions. Over time, says MacFarlane, the Renault Square Com communications center may invite the public in more often, and expand its program with such functions as art shows. After Métal 57's transformation began, the building became part of an ambitious urban development scheme. The huge surrounding site has been bulldozed, leaving only the oldest Renault building, from 1910. As Parisian land values rise, the area has acquired a master plan for residential and commercial development, office buildings, parks, boardwalks, riverside quays, and a monorail. (None of this, however, will likely become reality in the near future, and Pinault's withdrawal may make the scheme more difficult to realize.)

Reclaiming its last foothold on the site, Renault has recognized the value of maintaining proximity to Paris—and a presence in its greater public forum. (In the city itself, the corporation has a small design atelier, near Place de la Bastille, and since the '90s, a restaurant/exhibition venue on the Champs Elysées.)

In creating an interior urban realm, the architects left Métal 57's most spectacular, central space largely untouched. With honeycomb panels, they in effect inserted a main street. This small, covered city offers a brilliant and economically efficient solution to an otherwise almost intractable problem. Clearly, the daunting size and vast spans of Métal 57 did not intimidate Jakob + MacFarlane. Quite the contrary. ■

PHOTOGRAPHY: © NICOLAS BOREL (OPPOSITE)



Beneath the great sawtooth roof, pleated walls create such intimate spaces as meeting rooms (opposite, right) and alleys (this page). Wood panels partially clad the exteriors of the enclosed volumes (this page and opposite, left).

Foster and Partners tethers the billowing steel SAGE GATESHEAD concert hall to the banks of the Tyne in England

By Suzanne Stephens

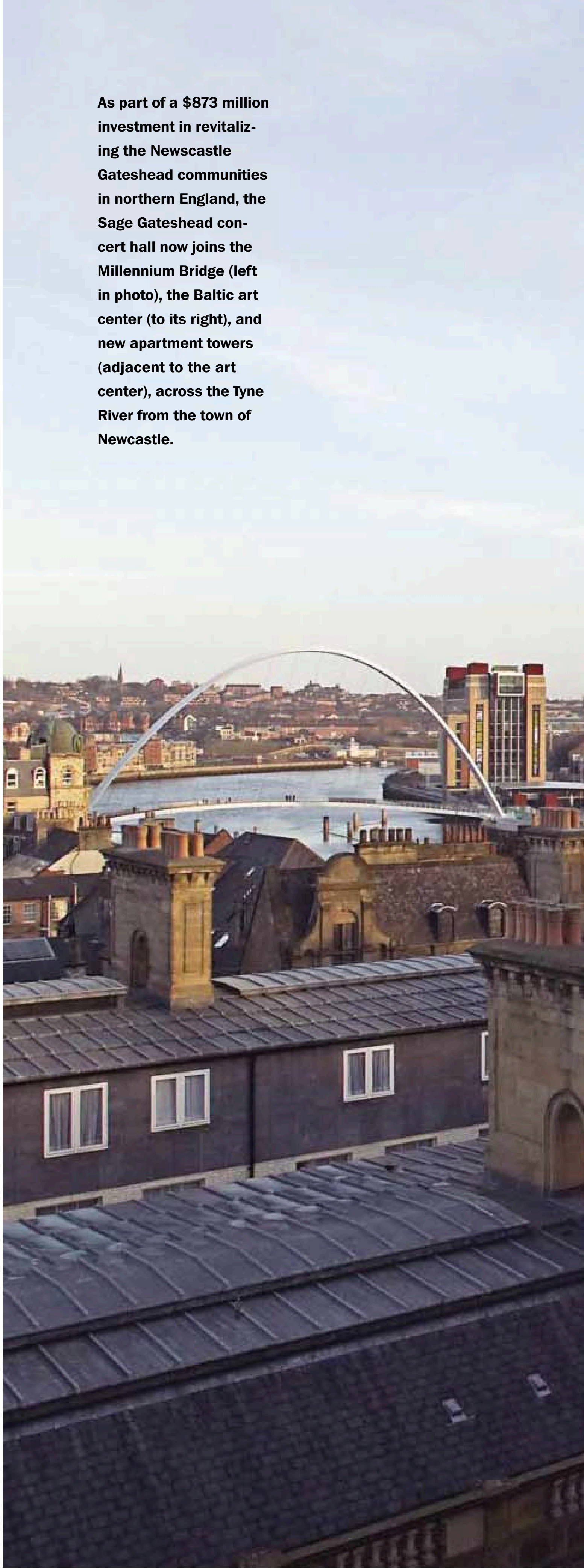
The urban regenerator du jour may not be a museum. More and more, concert halls are getting into the act—performing the functions of creating jobs, attracting tourists, and qualifying for infrastructure grants—as seen by Sage Gateshead in northern England. [For other concert halls in the works, see RECORD, January 2005, page 133]. The town of Gateshead, opposite the Tyne River from Newcastle, and with a population of only 189,000, is counting on the 215,200-square-foot concert hall, designed by Foster and Partners, to bring in at least 600,000 people a year. Along with the nearby Baltic Center for Contemporary Art, housed in a renovated flour mill, and Wilkinson Eyre's dynamically elegant Millennium Bridge, which connects to cafés and hotels on the Newcastle side of the Tyne, this large, gleaming, bulbous performing arts center promises to turn an area once known for coal and shipping into an arts mecca. Already its presence has political ramifications: At its pre-election conference held in the Sage Gateshead this past spring, the Labour Party claimed the newly opened hall as a symbol of its success in bringing economic improvement to the once-blighted area.

Commanding the heights of the south bank of the Tyne, Sage Gateshead's splashy architecture defines itself as an instant icon in the mold of Gehry's Guggenheim Bilbao [RECORD, October 1997, page 74] and his Disney Hall in Los Angeles [RECORD, May 2004, page 44]. Yet it should be noted that calling a work of architecture an icon in Great Britain these days is almost an insult. In the past few months, two books have been published in which architecture critics Deyan Sudjic (*The Edifice Complex: How the Rich and Powerful Shape the World* [Penguin]), and Miles Glendinning (*The Last Icons: Architecture Beyond Modernism* [Graven Images]) have proclaimed or wished for the death of this marketing device; as Glendinning put it, "Architecture has been hijacked by consumerism."

For his part, Charles Jencks defends the trend—under certain conditions. In his book *The Iconic Building* (Rizzoli), also just published, Jencks argues that such symbolic dazzlers have serious roots in Modernism, going at least as far back as Le Corbusier's sculpturally evoca-

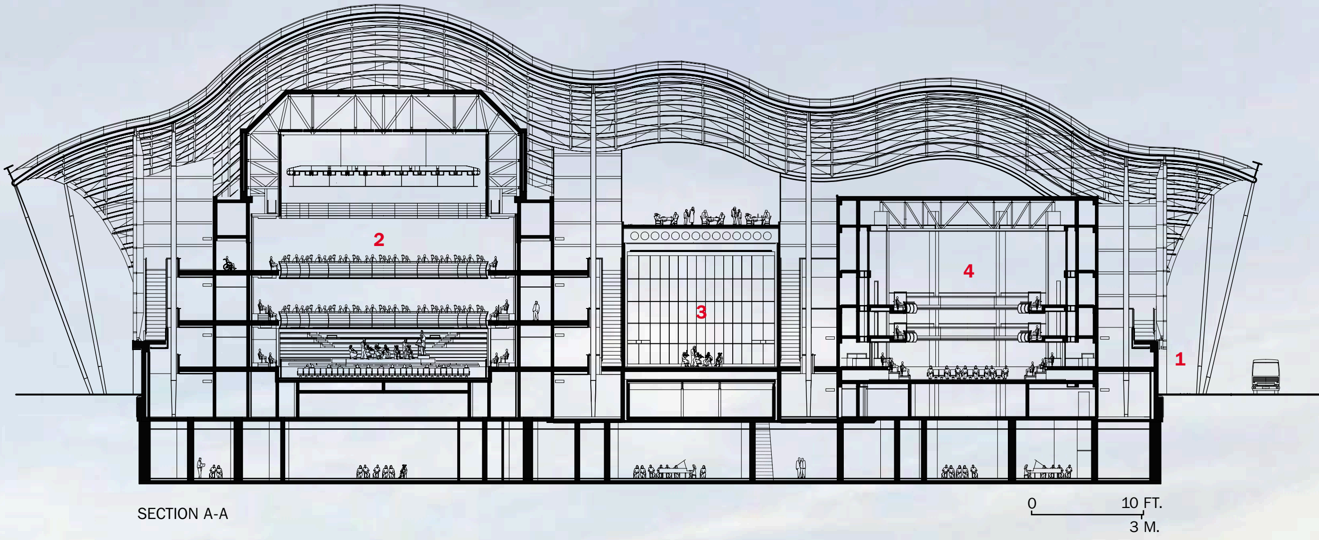
Project: *The Sage Gateshead, Gateshead, Tyne and Wear, England*
Owner: *Gateshead Council*
Architects: *Foster and Partners—Spencer de Grey, partner in charge; Jason Flanagan, project architect; Austin Relton, Stuart Macalister, Iain Fairbairn, George Stowell, Jason McColl, Daniel Goldberg, Armin Buchbinder, project team*
Engineers: *Buro Happold (structural); Connell Mott MacDonald (structural and services)*
Consultants: *Arup (acoustical); Equation Lighting Design (lighting); Desvigne & Dalnoky (landscape)*

PHOTOGRAPHY: © RICHARD BRYANT/ARCAID, EXCEPT AS NOTED



As part of a $873 million investment in revitalizing the Newscastle Gateshead communities in northern England, the Sage Gateshead concert hall now joins the Millennium Bridge (left in photo), the Baltic art center (to its right), and new apartment towers (adjacent to the art center), across the Tyne River from the town of Newcastle.

1. *Entrance*
2. *Main concert hall*
3. *Rehearsal hall*
4. *Decagonal hall*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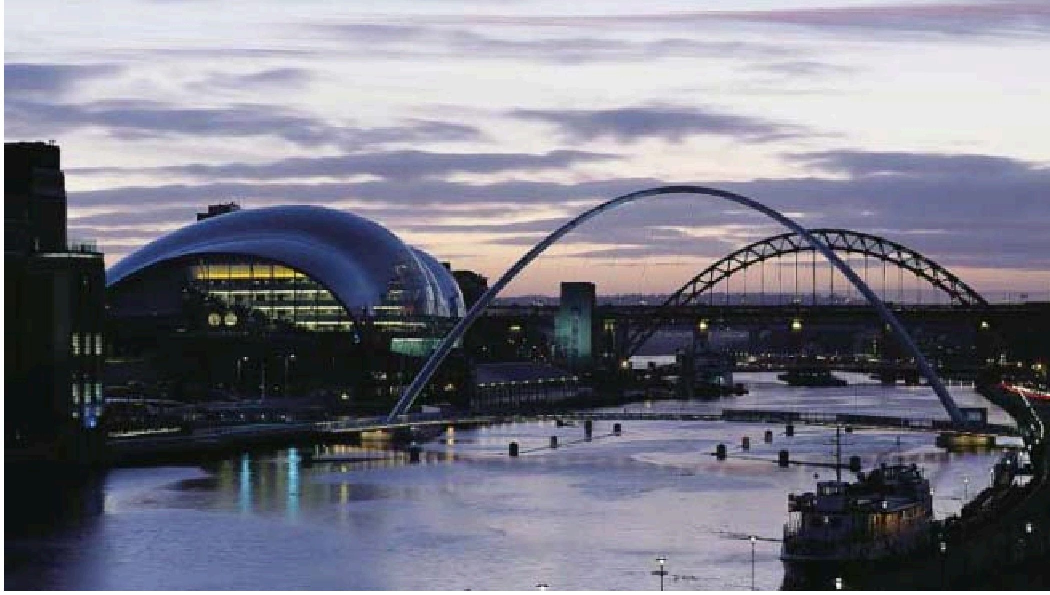
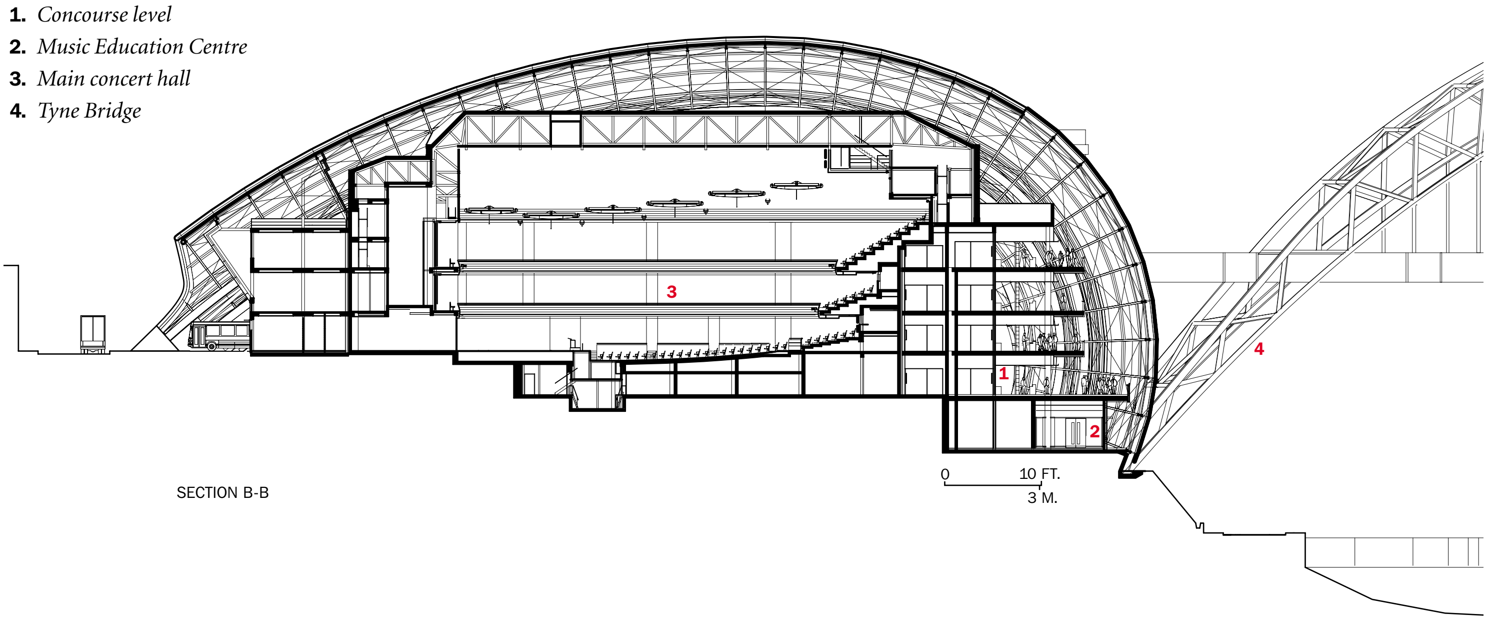
The Sage Gatesh



The blimplike structure sits on an area of 86,111 square feet at the top of the south bank of the Tyne River. The roof, clad in stainless steel, rests on four steel arches that extend north–south and are bolstered by slender steel props (opposite); secondary arches overlay the primary ones. The structure echoes the arches of the Millennium and Tyne Bridges (right).



1. *Concourse level*
2. *Music Education Centre*
3. *Main concert hall*
4. *Tyne Bridge*

SECTION B-B

tive Nôtre Dame du Haut at Ronchamp. Sage Gateshead may not aspire to be a Ronchamp, but it demonstrates vividly the characteristics of the iconic building—economically, urbanistically, and architecturally. Indeed, its riveting, engulfing form poses the question: Whereas architecture can always be iconic, is an icon always architecture—architecture with a cap A?

Birth of an icon

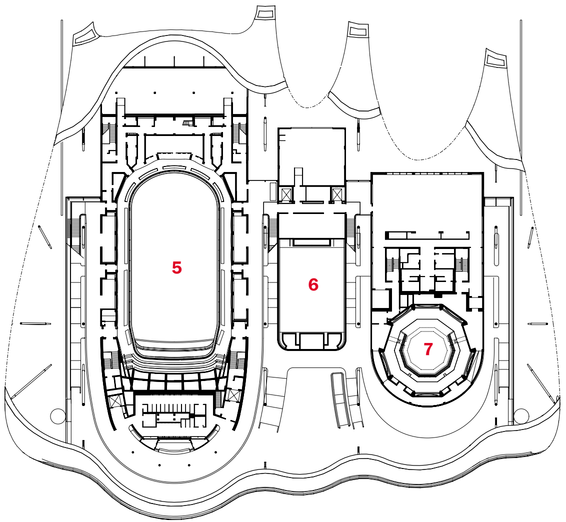
The $122 million Sage Gateshead was conceived in 1997 after the Gateshead Council, the city's governing body, held a competition for the concert hall complex. It would be subsidized by an $83 million grant from the Arts Council, grants from One North East, a regional development agency, and the European Regional Development Fund, plus a $10.5 million donation from Sage, a local software company. Of the 100 architects who registered for the competition, 12 were asked to do concept sketches; ultimately, Foster won, out of a shortlist of six firms. This would be Foster's first concert hall, but not the last—since then the firm has been commissioned to design the Winspear Opera House in Dallas, and to renovate Avery Fisher Hall at New York City's Lincoln Center.

From the start, the Gateshead Council and North Music Trust—which was in charge of the musical organizations coming into the hall—teamed up Foster and Partners, headed by partner Spencer de Grey, with Arup Acoustics, led by Raj Patel and Bob Essert. The players were well-suited for the design of such a project: As a boy, de Grey had lived in Newcastle, where his father taught painting, and Patel had been classically trained on the trumpet before turning to acoustical engineering.

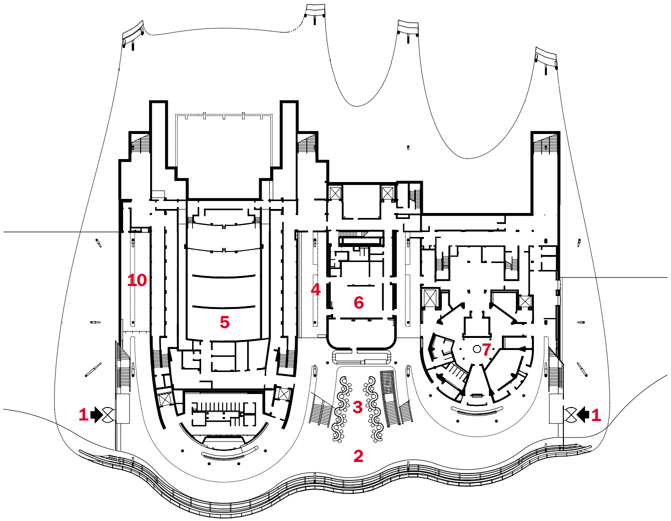
Fleshing it out

After consulting the Northern Sinfonia, the chamber orchestra that would have its home at Sage Gateshead, Patel and de Grey elected to model the shape of the largest space, a 1,700-seat hall, on the acoustically acclaimed classic shoe box of Vienna's Musikvereinsaal, built in 1870. The new, rectilinear hall, with ribbed ash walls and birch ceiling, seats, and balustrades, is distinguished by a rich and reverberant sound. In addition to the wood surfaces, six panels of medium-density fiberboard and plywood, suspended over the stage, can move between 34-foot and 66½-foot heights. To further enhance the acoustics, the team designed the orchestra seating to be located in a shallow parabolic dish. And depending on musical needs, sound-absorbent curtains roll out over the diffusing walls.

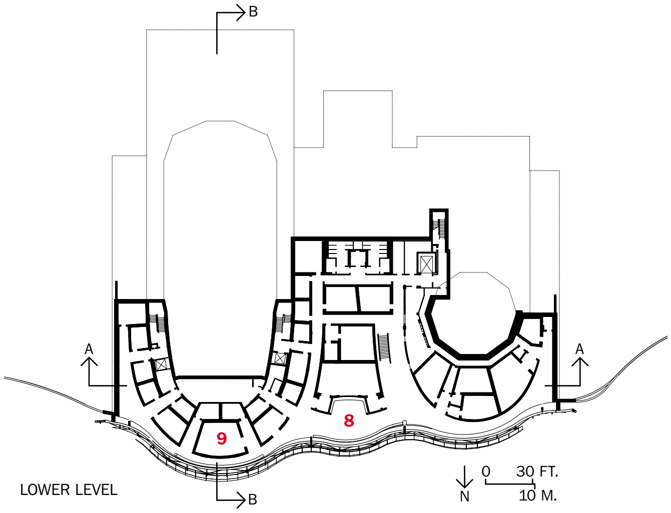
PHOTOGRAPHY: © NIGEL YOUNG/FOSTER AND PARTNERS



THIRD LEVEL

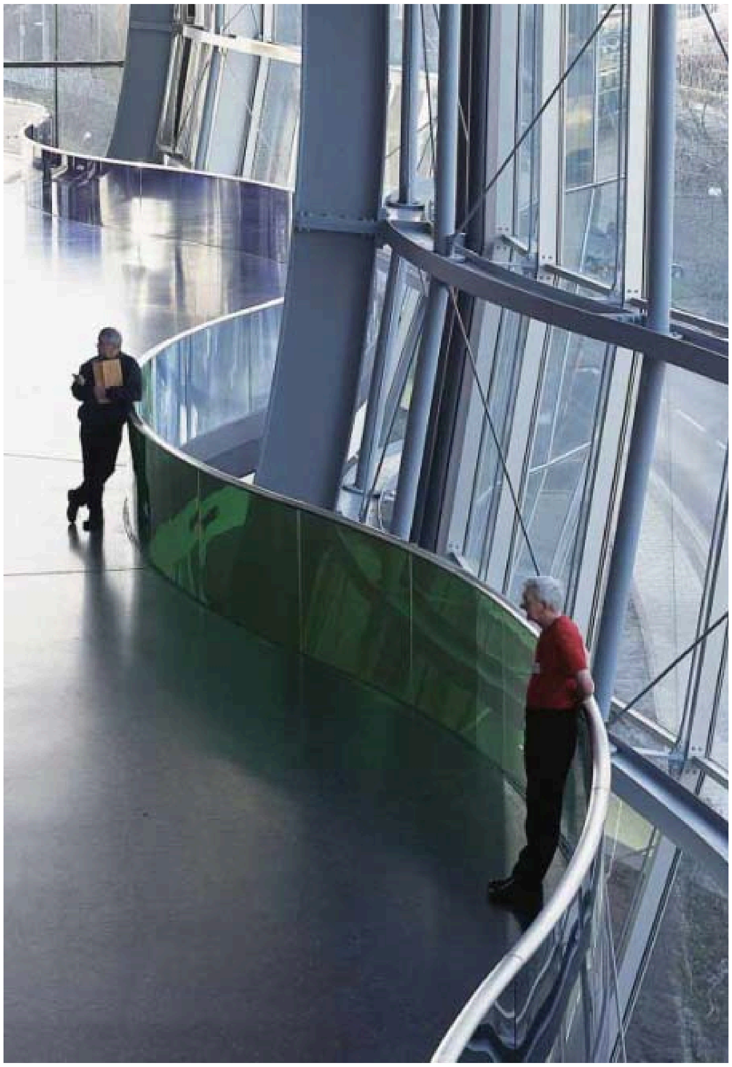


MAIN CONCOURSE LEVEL



LOWER LEVEL

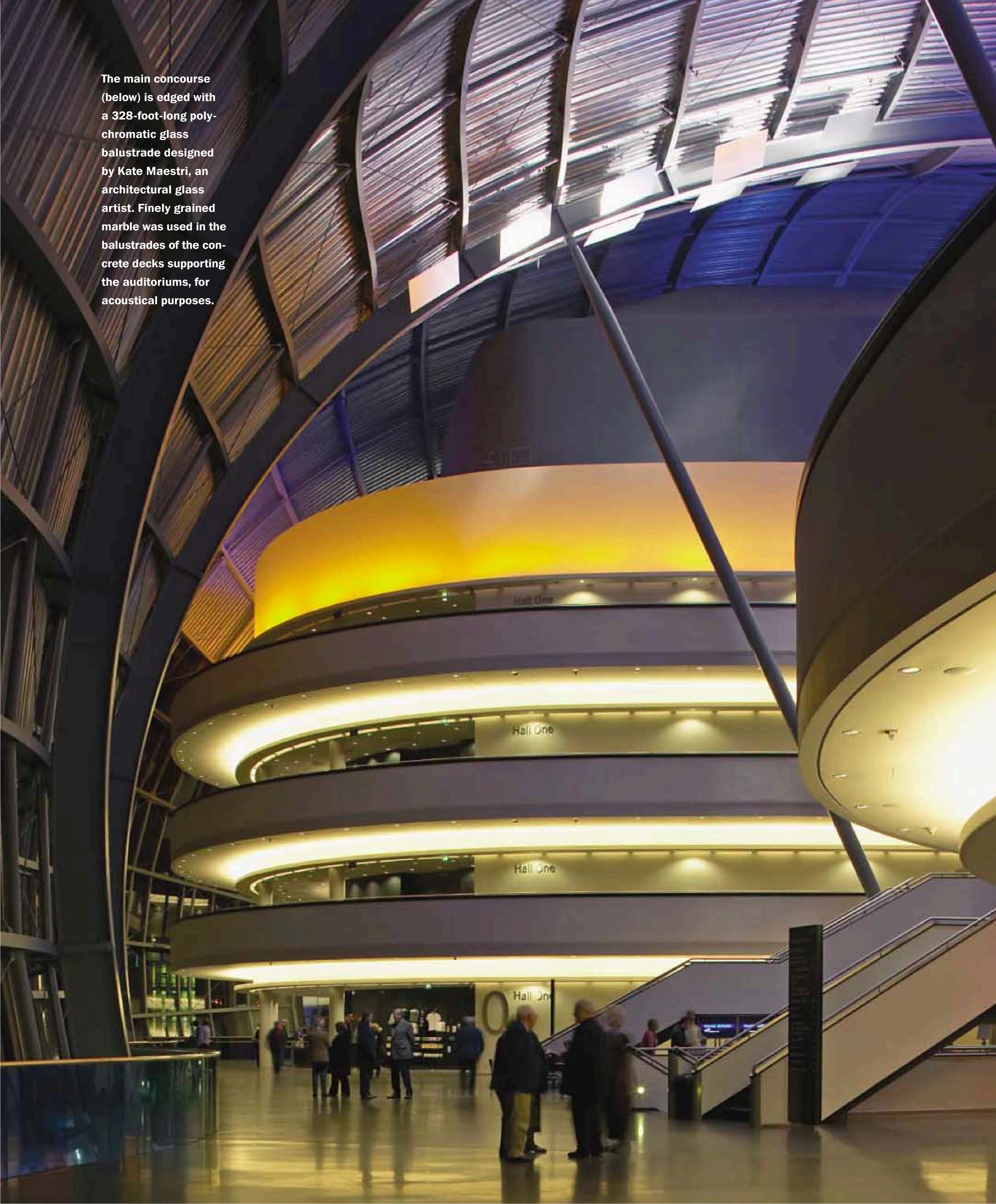
1. *Entrance*
2. *Main concourse*
3. *Café*
4. *Restaurant*
5. *Main concert hall*
6. *Rehearsal hall*
7. *Decagonal hall*
8. *Lobby for Music Education Centre*
9. *Practice rooms*
10. *Research library*



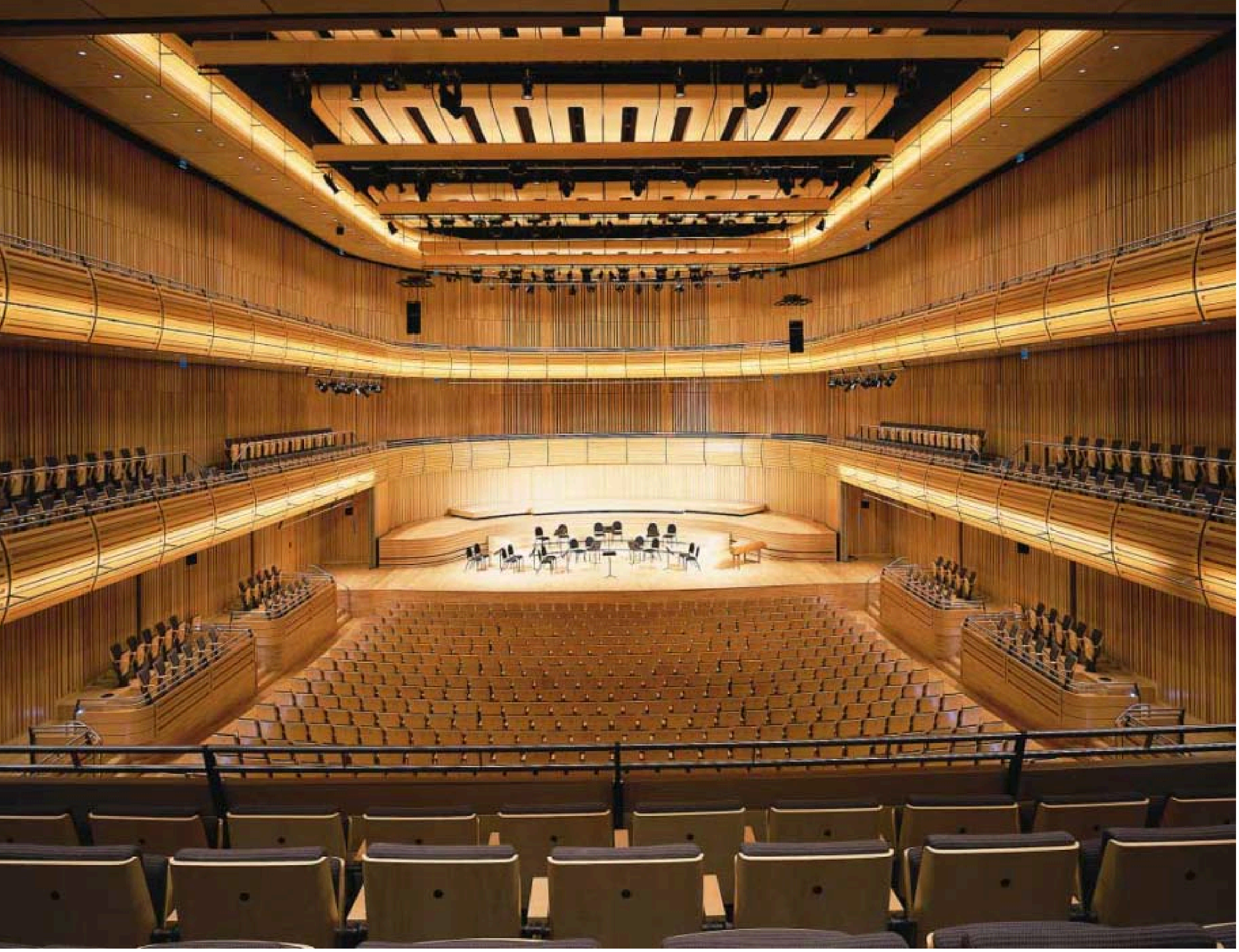
For electronic, jazz, folk, and chamber music, de Grey and Patel devised a 400-seat decagon, a 10-sided performance space lined with plywood panels stained red and articulated with ash dowels, also stained red. Between the two is a rehearsal hall (named the Northern Rock Foundation Hall), which can be used for concerts or as a recording studio. On the floor below the halls, the Music Education Centre, with 26 practice and performance spaces, is linked by a sinuous lobby that also overlooks the Tyne.

To guarantee acoustical isolation, Foster treated the auditoriums and other spaces as distinct units with concrete-frame structures and concrete-block infill. The spaces in between the concrete units are devoted to circulation, all enclosed by the soaring, curvaceous stainless-steel-and-glass shell, also a structurally separate entity. Curving balconies girdling the auditoriums bulge out into the lobby like huge white ships in dry dock within the cavernous space, which soars as high as 130 feet.

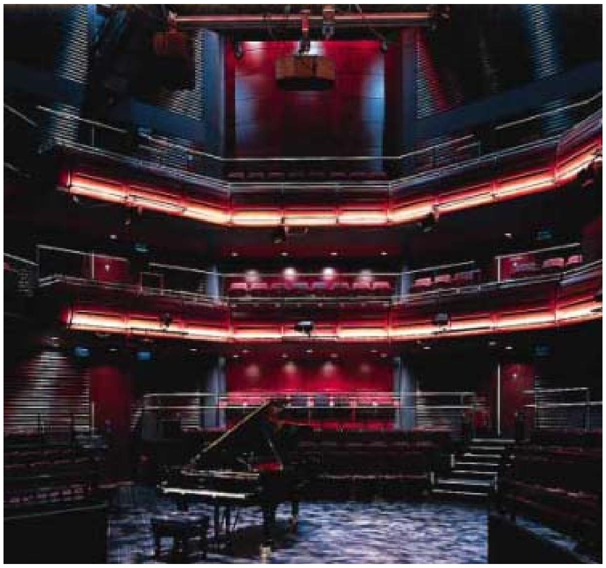
In creating this gargantuan shell of 3,000 flat, stainless-steel panels and 280 glass panels with a low-E coating, the team, which included structural engineers Buro Happold, headed by Mike Cook, specified a linen finish on the stainless-steel panels to reduce glare. Furthermore, an interior filling of rigid foam insulation diminishes drumming sounds from the rain. Four steel primary arches placed between the main halls and spanning 262 feet from the esplanade wall to the rear of the site support this carapace, supplemented by slender steel props. Secondary arch members, running in the east–west direction, overlay the primary arches to generate the interlocking toruslike forms, which are further stiffened with

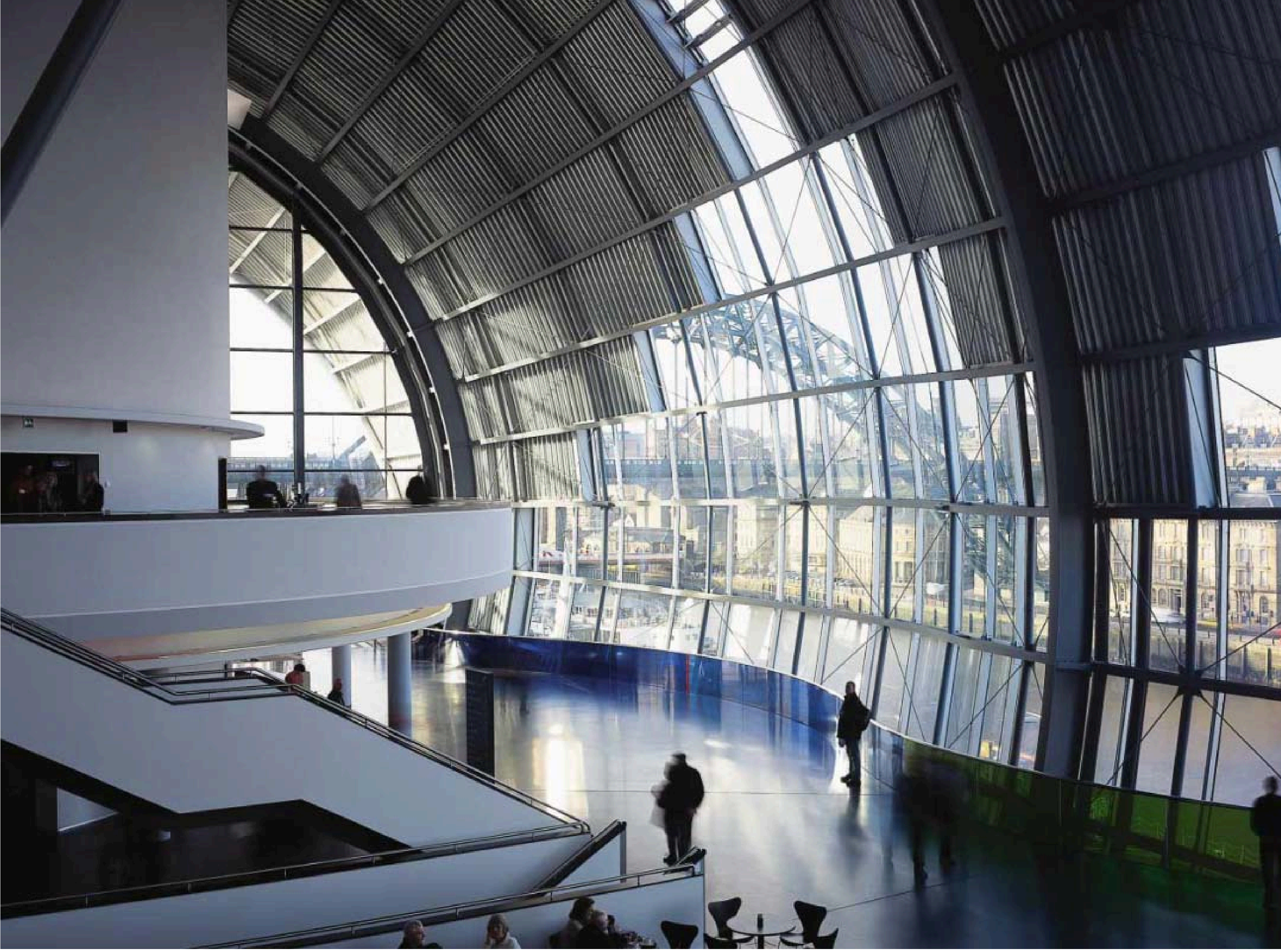

Hall One
Hall One
Hall One
Hall One

The main concourse (below) is edged with a 328-foot-long polychromatic glass balustrade designed by Kate Maestri, an architectural glass artist. Finely grained marble was used in the balustrades of the concrete decks supporting the auditoriums, for acoustical purposes.



In the major hall, with 1,700 seats (above), the ribbed ash walls help sound diffusion. Seats, ceilings, and balustrades are birch, and air supply comes through the metal pedestals of the chairs. The 400-seat decagon (near left) is designed for a variety of music, and its plywood walls with ash dowels are stained red. The lobbies for the auditoriums (opposite) and the corridor for the Music Education Centre (far right) overlook the Tyne.





tertiary struts and diagonal bracing. Parametric computer modeling helped give birth to a steel grid shell that weighs a hefty 720 tons.

Achieving the gestalt

In terms of acoustics, the auditoriums have generally met with enthusiasm from the critics. As an architectural object, Sage Gateshead sits calmly and eerily, like a moored blimp, among the chimney pots and Victorian spires and iron bridges of this 19th-century industrial town. All in all, the behemoth projects a benign presence, as if designed by someone inspired both by 19th-century conservatories and Archigram's 1960s Plug-in Cities. Shiny steel curves of the techno-organic form speed the gestalt. But its broad, bulbous mass would look clunky on a flat site or in a more urbane context. It needs the gritty city feel of these higgledy-piggledy ramparts.

Indeed, its success architecturally owes largely to the variegated setting rather than to its posing a solution that might inspire other performing arts centers. Here, it doesn't matter that there is no grand entrance, for example, since the Sage Gateshead's site discourages entering from the steep bank. Here, too, the flat-footedness between the roof form and the base is covered by vegetation; where it's not, such as the rear, the architects designed the roof surface to evoke tentlike tails anchored to the slope—a klutzy touch when done in hard materials.

Other such gestures as the ziggurat patterns of the glazing, the airplane-hangarlike scale of the lobby, and the brusquely handled undercroft of the roof lack the refinement of Foster's big hits of the past. (Yes, a higher budget would have helped.) Ironically, the Millennium Bridge—a work of engineering—offers a better instance of exquisite line and delicate proportions than Sage Gateshead. So being an icon isn't easy. The softly gleaming, sinuous, large-scale, eye-catching features guarantee it will be iconic. But in the end, large gestures need to be backed up by lots of small, delicate moves for an icon to become a full-fledged work of architecture. ■

Sources

Stainless-steel envelope and curtain wall: *Waagner Biro Stahl-Glas Technik*

Resin terrazzo floor: *Standaart Flooring*

Rubber flooring and carpet: *Durastic*

Timber flooring: *Watson-Brook*

Main hall seating: *Fugueras International Seating*

Timber acoustic wall cladding: *Abrahams and Carlisle*

Acoustic fabric lining: *Eomac*

For more information on this project, go to Projects at **www.architecturalrecord.com**.

2½"
3"
3½"
4"
4½"
5"
6"

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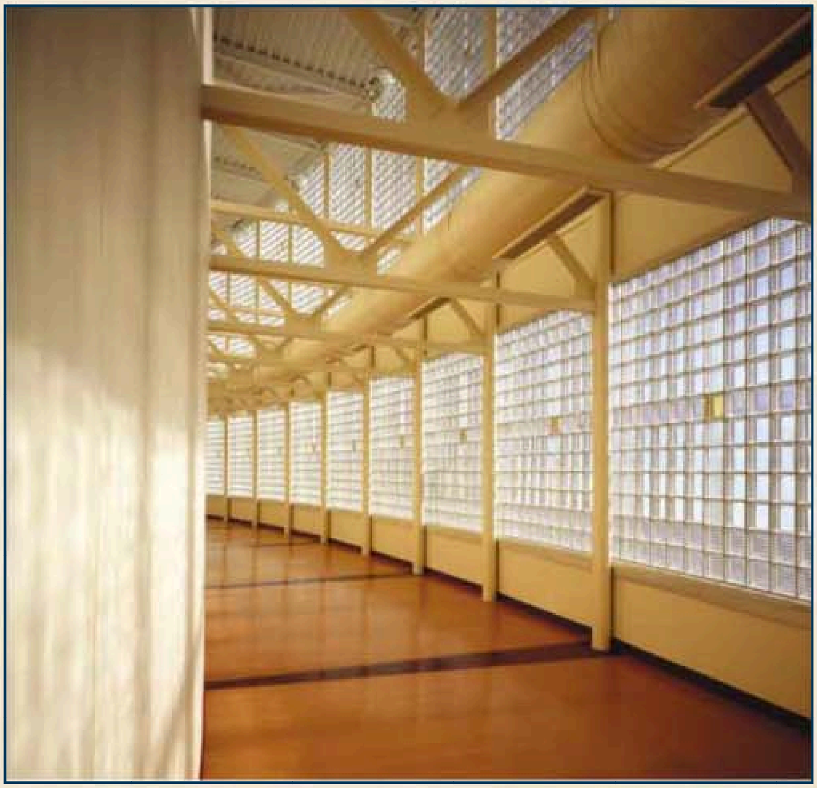
At right, Nitschke Auditorium, University of Toledo
Architect: Smith, Hinchman & Grylls Associates, Inc.



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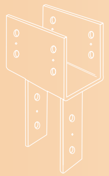

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Colleges and Universities

Meeting Places

AS UNIVERSITY CONSTRUCTION REMAINS STRONG, PLANNERS ARE LOOKING CLOSELY AT HOW NEW PROJECTS CONTRIBUTE TO THE OVERALL CAMPUS FABRIC AND FEEL.

By Deborah Snoonian, P.E.

In the 1989 film *Field of Dreams*, the main character, Ray Kinsella, is compelled to build a baseball diamond in his Iowa cornfield when he repeatedly hears a whispered, insistent mantra: "If you build it, they will come." One wonders, given the huge number of college and university projects that have crossed our desks in the past three years, if campus planners have been hearing the same voice. As Nancy Levinson and James Russell, AIA, pointed out in RECORD's August 2004 issue, which focused on university architecture, buildings have taken on the recruiting role long played by search committees, development offices, and enthusiastic alumni—they're expected to be multitasking, dynamic, and able to attract top-notch students and faculty.

Yet what happens once those folks show up? New student housing and state-of-the-art research labs certainly play well during tours and on the pages of glossy brochures, but let's face it—not every student gets to live in the latest dorm, and not every professor benefits from specialized facilities. As Levinson explained in "Campus Planning Is Breaking New Ground" [RECORD, August 2004, page 86], architects and facility managers in higher education are executing long-term master plans that emphasize landscape, open space, and community presence and engagement, all with an eye toward establishing that intangible "quality of life."

In various ways, the four projects shown here depend on apt programming, siting, and design in the service of this goal. The University of Cincinnati, which has tapped a number of star architects for projects over the past 15 years, recently opened a student life center that knits these buildings together, acting as a gateway, gathering spot, and "home base" that students leave from and return to as they go from classes to extracurricular activities to socializing. The student center at Chandler-Gilbert Community College in Arizona serves a similar function, and its flexible indoor/outdoor space has already proved popular for informal get-togethers between faculty and students. Instead of sealing off the history of science department at Harvard University's Science Center, a new wing incorporates not one but two public exhibition spaces for displaying its rich collection of scientific artifacts. Finally, at The Evergreen State College in Olympia, a school known for its progressive politics, a series of semidetached green buildings form a pleasant "quad," with one structure containing a public-information center for those who want to learn about the school and the environmental features of the new buildings.

In *Field of Dreams*, former ballplayers show up for one last game after Kinsella built his diamond. These schools are hoping for more—they want everyone not only to show up, but to stay for a while. ■

1.

Cincinnati, Ohio

Moore Ruble Yudell and Glaserworks weave a handsome student center into the heart of a campus studded with signature architecture.

2.

Cambridge, Massachusetts

Just north of Harvard Yard, Leers Weinzapfel Associates places three small, elegant additions atop Josep Lluís Sert's 1970 Science Center.

3.

Olympia, Washington

A new green academic building by Mahlum Architects embodies the spirit of a school known for environmental and social responsibility.

4.

Chandler, Arizona

At a growing community college, Architekton adds a centrally located, casual gathering space for faculty and students.

For more information on these projects, go to Building Types Study at **www.architecturalrecord.com**.

PHOTOGRAPHY: © ALAN KARCHMER/ESTO (1); PETER AARON/ESTO (2); LARA SWIMMER/ESTO (3); BILL TIMMERMAN (4)

Joseph A. Steger Student Life Center
Cincinnati, Ohio

1

MOORE RUBLE YUDELL AND GLASERWORKS INSERT A LONG, DYNAMIC STRUCTURE INTO A TIGHT SITE, BINDING A CAMPUS AND COMMUNITY TOGETHER.

By Jayne Merkel

Architect: *Moore Ruble Yudell Architects & Planners—Buzz Yudell, FAIA, partner in charge; John Ruble, FAIA, partner; Mario Violich, principal in charge; Adam A. Padua, Assoc. AIA, project manager, associate in charge*

Architect of record: *Glaserworks—Arthur A. Hupp, AIA, principal in charge; Steve Haber, AIA, project manager; Michael A. Moose, AIA, design liaison; Michael Maltinsky, construction administration*

Client: *University of Cincinnati—Joseph A. Steger, president; Ron Kull, university architect; Greg Robinson, project manager*

Engineers: *Arup and THP Limited (structural); Arup and Heapy Engineering (m/e)*

Consultants: *Hargreaves Associates (landscape); Kolar Design and Marcia Shortt Design (environmental graphics); Brashear-Bolton (codes)*

General contractor: *Messer/Jacobs*

Size: *85,000 square feet*

Cost: *$21 million*

Completion date: *April 2004*

Sources

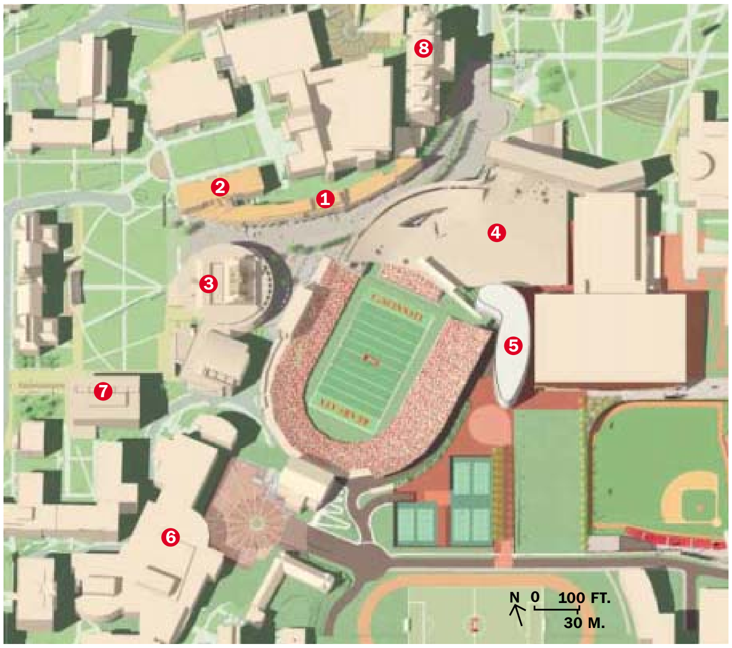
Metal/glass curtain wall: *Waltek & Company*

Masonry: *Belden*

Zinc paneling: *Umicore Building Products*

For more information on this project, go to Building Types Study at **www.architecturalrecord.com**.

For more than a decade, the University of Cincinnati has endeavored to create a campus fit for full-time students at what was once mostly a commuter college. Now, tucked into the heart of the school's academic campus, the Joseph A. Steger Student Life Center establishes connections via enclosed pedestrian paths, arcades, passageways, and terraced gardens. The architects embraced a difficult site stylishly, bringing a rugged, up-to-date urbanity with a West Coast flavor to the Midwest by overlapping interior and exterior spaces, employing lots of natural light, and boldly juxtaposing brick, metal, and concrete surfaces.



1. *Joseph A. Steger Center*
2. *Swift Hall*
3. *Tangeman University Center*
4. *Student Recreation Center*
5. *Richard E. Lindner Varsity Village*
6. *College-Conservatory of Music*
7. *University Pavilion*
8. *Engineering Research Center*

Program

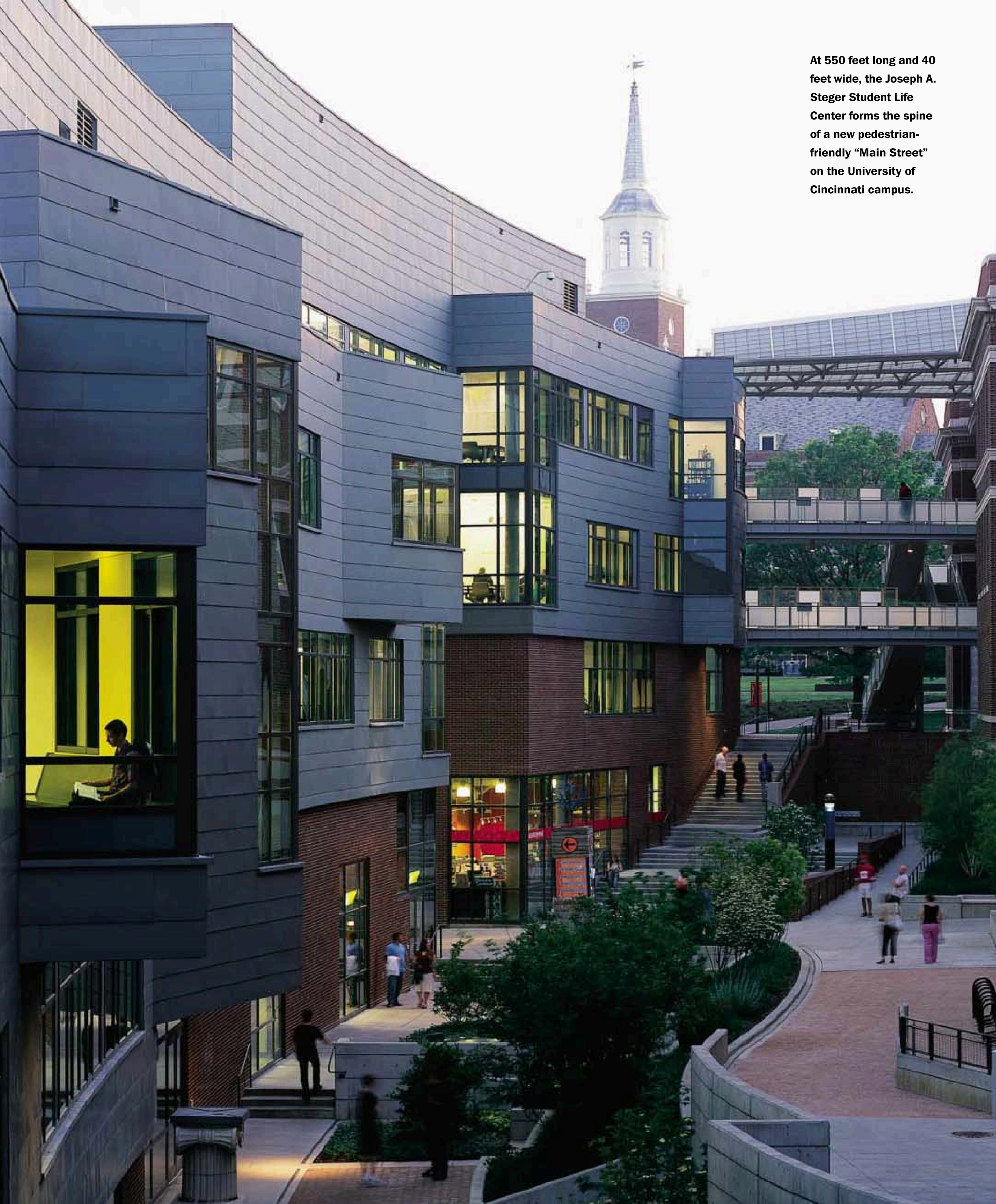
In 1989, the university implemented a Signature Architects Program intended to put the school on the national map with brazen new buildings by architects such as Frank Gehry, Peter Eisenman, and Michael Graves. Late in the 1990s, the second phase of this program began; unlike the first, its goal is to provide a "quality of campus life" the school still lacked. A 2000 master plan by landscape architect George Hargreaves envisioned a lively pedestrian "Main Street" in the middle of campus that would act as an antidote to the earlier emphasis on isolated academic buildings. The Steger Center was commissioned and built under this rubric. Sited on a long, narrow lot that was once a driveway, the center's program called for a student health center, coffee shop, student organizations, and computer lab, and was intended to connect open spaces and existing buildings with the renovated Tangeman University Center (the student union) by Gwathmey Siegel and GBBN, and the new Student Recreation Center by Morphosis and KZF.

Solution

The center's zinc-clad, arc-shaped exterior echoes a zinc-faced element on Tangeman to the south. Its red-brick base picks up on Tangeman's neo-Georgian facade and on Swift Hall, a 1920s classroom building to the north that the designers renovated and connected to the center with a skylit canopy. Terraced paths lead down to the Student Recreation Center, which bends around the historic football stadium beside it.

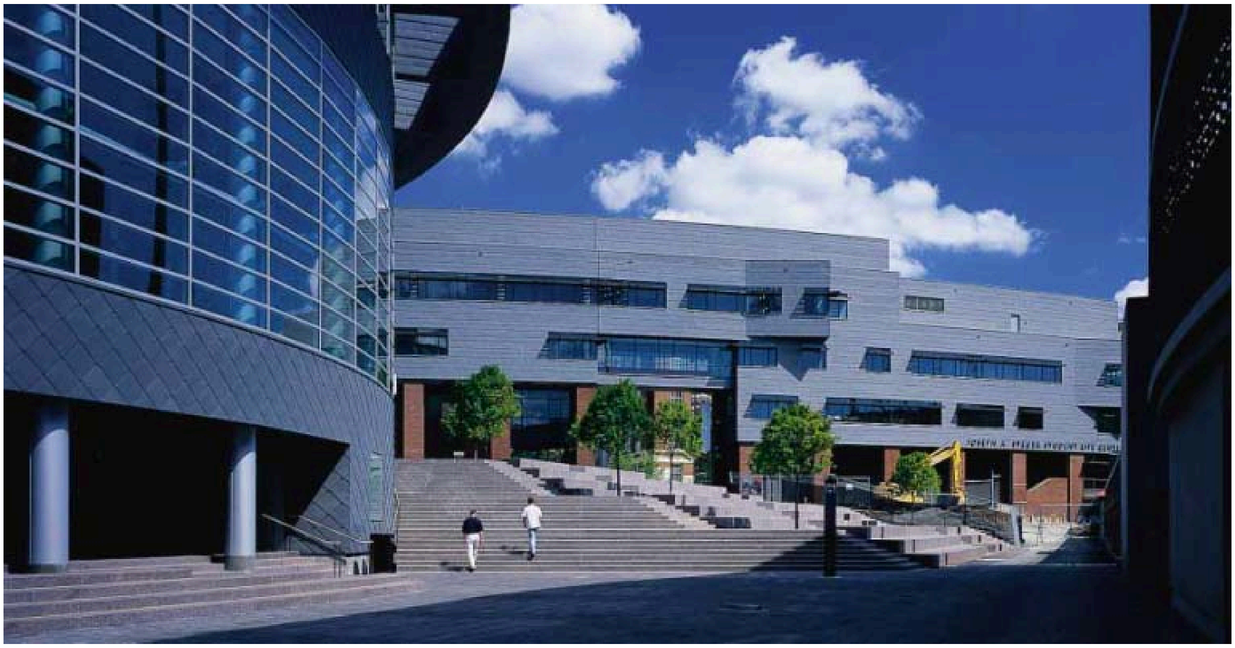
Jayne Merkel, whose monograph on Eero Saarinen will be published in September, is a former architecture critic of The Cincinnati Enquirer.

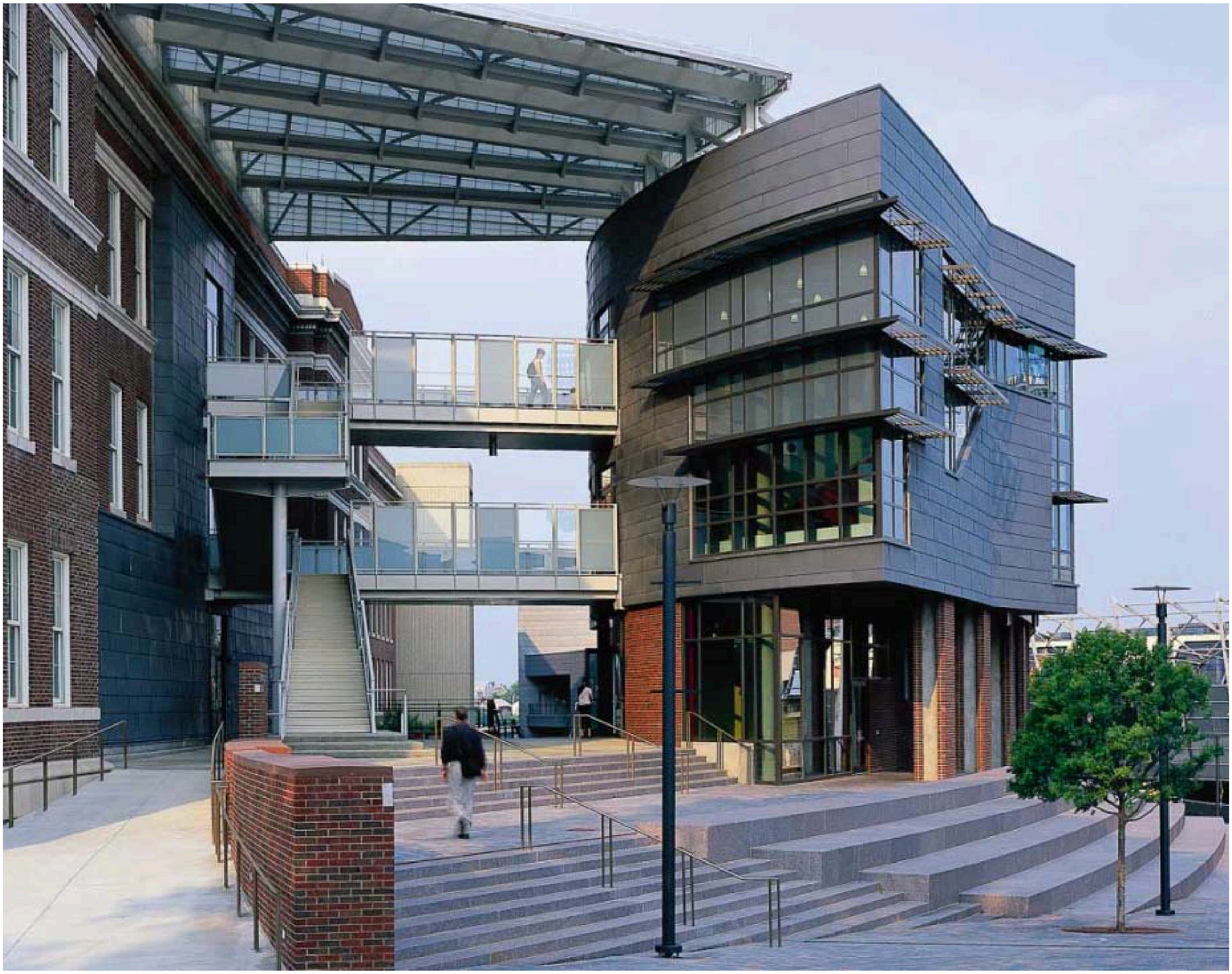
PHOTOGRAPHY: © ALAN KARCHMER/ESTO, EXCEPT AS NOTED; RON POLLARD PHOTOGRAPHY (OPPOSITE)



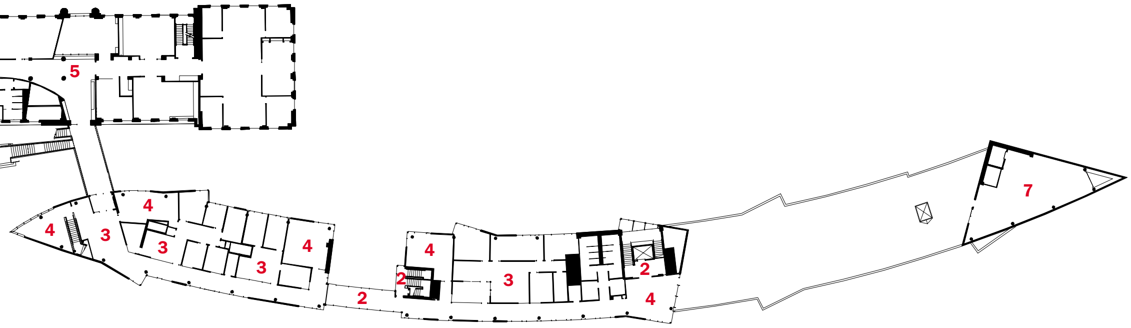
At 550 feet long and 40 feet wide, the Joseph A. Steger Student Life Center forms the spine of a new pedestrian-friendly “Main Street” on the University of Cincinnati campus.

Sweeping terraces and expansive staircases surround the Steger Center, leading to the Tangeman University Center (at left in photo, right) and the renovated Swift Hall, connected to the center by a canopy (below). Offices and student organizations on the center's north side overlook landscaped terraces and walkways that meander down a 55-foot grade (opposite).





Passageways through the Steger Center frame views of other campus buildings and serve as informal gathering spaces (left).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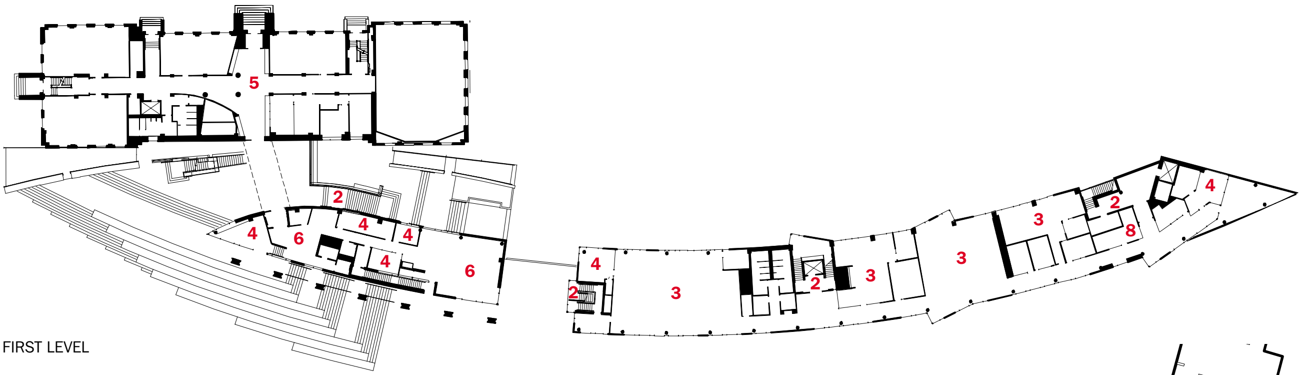
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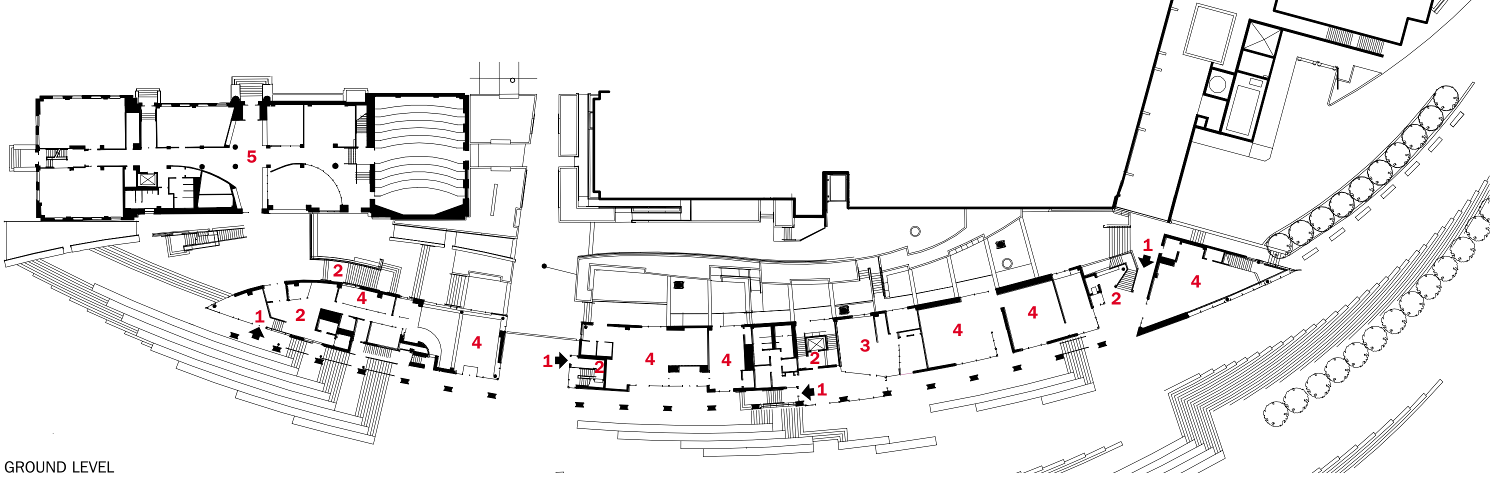
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GROUND LEVEL

1. *Entry*
2. *Public space*
3. *Circulation*
4. *Office*
5. *Swift Hall*
6. *Computer lab*
7. *Mechanical/ service room*

Under Hargreaves's master plan, now the university first hires a local firm as architect of record for new projects, and together they select out-of-town designers for their team. For the Steger Center, Glaserworks chose Moore Ruble Yudell because "when you look at their buildings, you feel the urge to run up the stairs, or pause on a landing before you descend. Their architecture invites involvement," said Glaserworks principal Mike Moose, AIA.

The Steger Center curves outward toward the campus green and the football stadium as it snakes down a 55-foot grade. On that expansive south side, a ground-floor loggia opens onto stepped outdoor seating. Inside, the rugged indoor/outdoor atmosphere is maintained as exposed concrete columns parade down narrow corridors with cozy window seats overlooking the action on campus. Since the building is only 40 feet wide, offices and student services occupy only the north side of the upper floors, where they overlook terraced gardens opening onto a ground-level art gallery, sandwich shop, and computer store.

Throughout the project, Moore Ruble Yudell and Glaserworks worked closely with the designers of Tangeman and the Student Recreation Center, meeting in person and sharing drawings on a project Web site "so that each team could mesh parts of their projects with its neighbors," Moose recalled.

Commentary

Building the center on residual space presented a significant challenge; the design team had to "surgically inscribe the building into the campus fabric," said Mario Violich, the project architect for Moore Ruble Yudell. This process enabled them to create real density on the hilly 137-acre campus. They made the most of the long, winding site by echoing forms of nearby buildings while putting a unique twist on their shapes with sharp angles and emphatic changes in grade. The result is a building that is both formally and programmatically dynamic. ■

The designers capitalized on a narrow floor plate and a long southern elevation by bringing in natural light to all corners of the building, even stairwells (right). Extensive glazing also reinforces the indoor/outdoor connection between the center and the rest of the campus. Touches of bright color animate the hallways and offices without overwhelming those spaces (far right and below).

Harvard University Science Center Expansion

Cambridge, Massachusetts

2

LEERS WEINZAPFEL ASSOCIATES FRESHENS UP AN ICONIC BUT TOUGH CONCRETE BUILDING WITH LIGHT-FILLED ADDITIONS OF GLASS AND STEEL.

By Deborah Snoonian, P.E.

Architect: *Leers Weinzapfel Associates Architects—Andrea P. Leers, FAIA, principal; Winifred Stopps, AIA, project manager; Alexander Carroll, AIA, project architect and construction manager*
Engineers: *Arup (structural, m/e/p)*
Consultants: *Stephen Stimson Associates (landscape); Cavanaugh Tocci Associates (acoustics); Berg/Howland Associates (lighting); Kessler McGuinness and Associates (accessibility); Hanscomb Faithful & Gould (cost)*
General contractor: *Linbeck*

Size: *26,800 square feet (additions); 38,700 square feet (renovated areas)*
Cost: *Withheld*
Completion date: *April 2004*

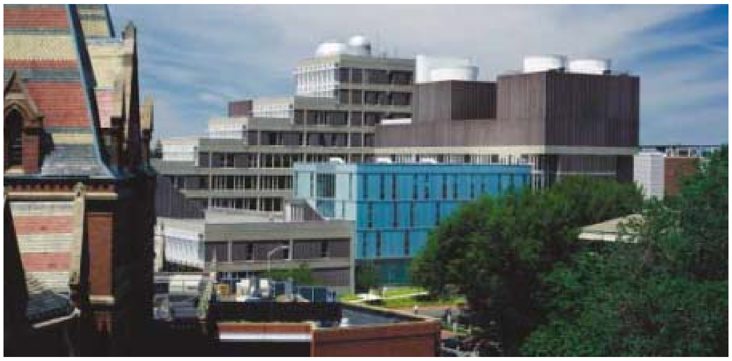
Sources
Metal/glass curtain wall: *Pilkington*
Aluminum windows: *EFCO*
Skylights: *Supersky*
Fire-rated glass: *GPX*
Glazed partitions: *Wilson Partitions*
Entry doors: *EFCO*
Cabinetwork and custom woodwork: *Fabrizio Corporation*
Paints and stains: *Sherwin Williams*
Carpet: *Shaw*
Resilient flooring: *Marmoleum*

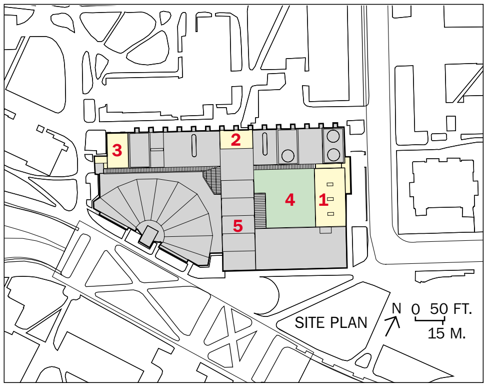
For more information on this project, go to Building Types Study at **www.architecturalrecord.com**.

Josep Lluís Sert's tenure as chair of Harvard's Graduate School of Design in the 1950s and '60s coincided with a period of growth and expansion for the entire school. His Harvard University Science Center, completed in 1970, extended the school north of Harvard Yard for the first time and has served as the de facto gateway to this area of the campus ever since. A few years ago, the Boston firm Leers Weinzapfel Associates was tapped to add more space to the existing 291,000-square-foot structure. The elegant, thoughtful additions, which peek out from behind the building when viewed facing the terraced south facade and main entry, pay homage to the form and scale of Sert's original while updating its massing and materials.

Program

A number of departments housed at the Science Center, including statistics, computer science, and the history of science, needed updating as well as more space for classrooms, labs, and administration. In addition, most of the history of science department's prized collection of some 15,000 scientific instruments, dating from as early as 1450, was squirreled away in a dusty basement far from the public's eye. Recognizing an opportunity to raise the profile of what is already one of Harvard's most popular programs, the chair of the department asked the architects for exhibition space to display the collection.





1. *History of science*
2. *Statistics*
3. *Computer science*
4. *Courtyard*
5. *Existing building*

Besides the additions, Leers Weinzapfel renovated an even larger portion of the interior of the building, including the replacement of leaky, single-glazed atria with up-to-date glazing systems. They also revamped the Science Center's pleasant courtyard with casual seating along with seasonal flowers and plantings.

Solution

With no space at the site for horizontal expansion, there was nowhere to go but up, up, up (yes, three times). Leers Weinzapfel designed one two-story rooftop addition for the computer science department; a second for statistics; and a third, three-story volume atop a revamped first floor on the east terrace of the building for the history of science department.

Fashioned in channel glass, clear glass, and steel, these new volumes seem to sit lightly on Sert's sturdy concrete base, yet manage to hold their own weight. The vertical pattern of the metal-and-glass facades brings to mind computer

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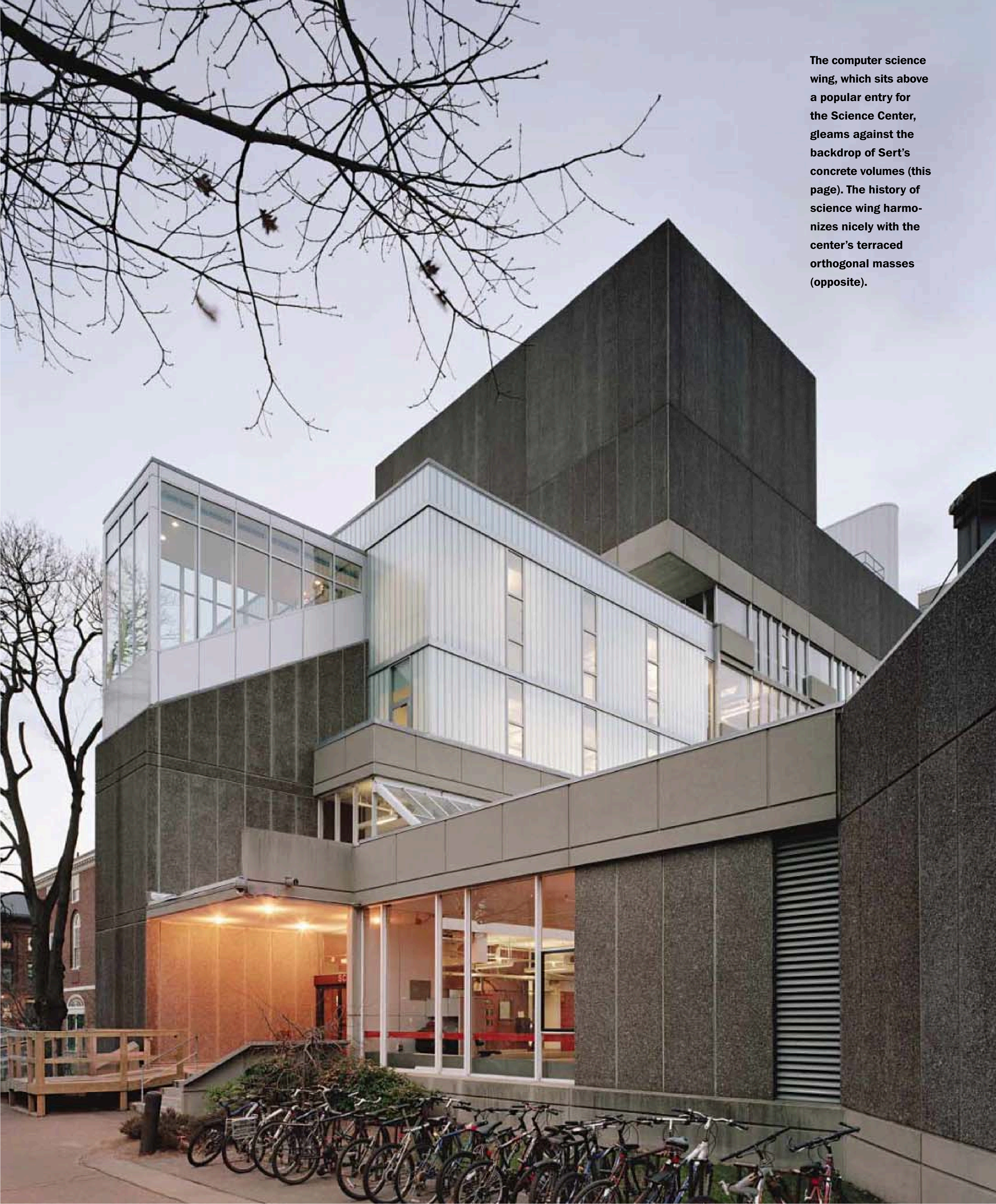
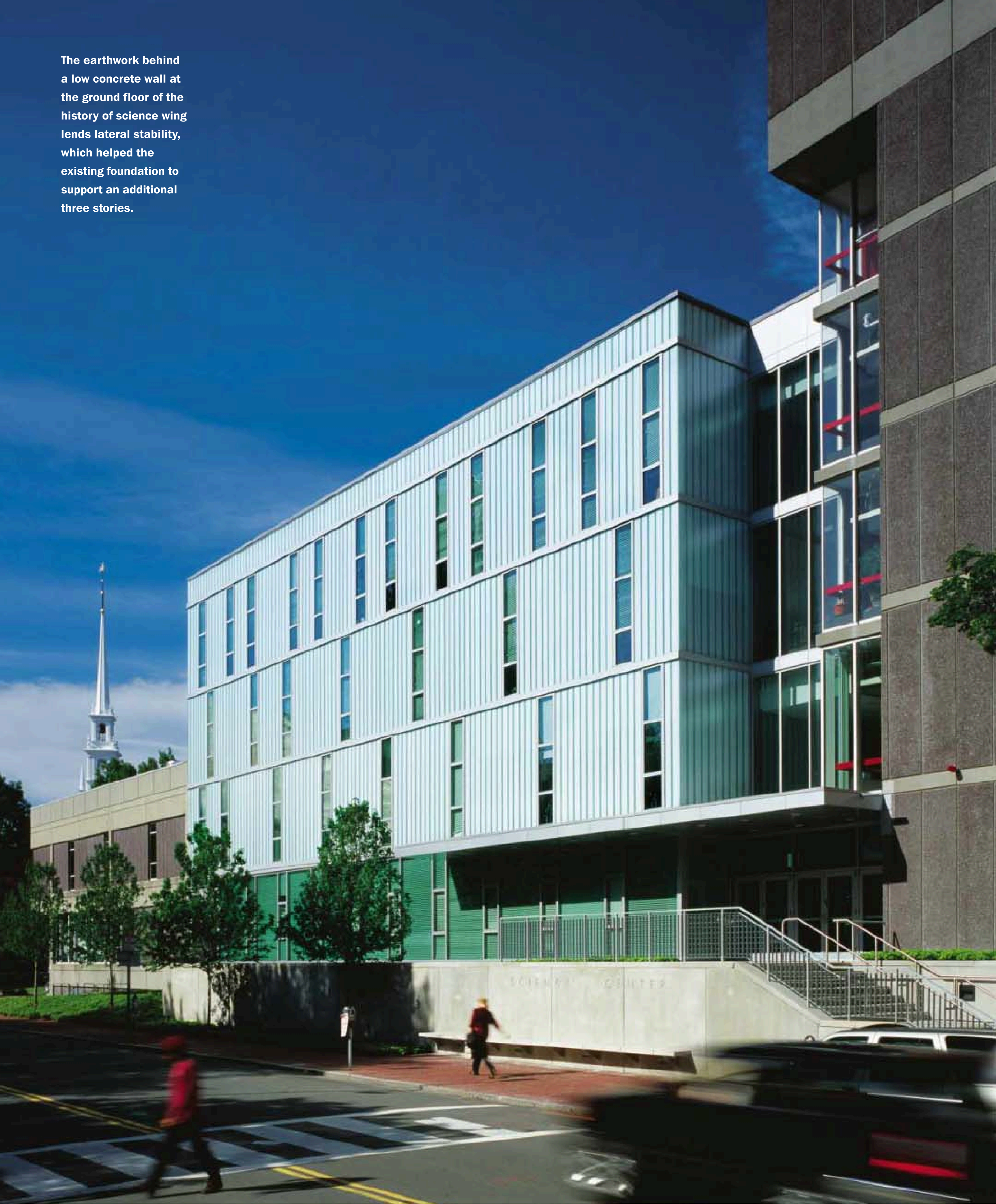
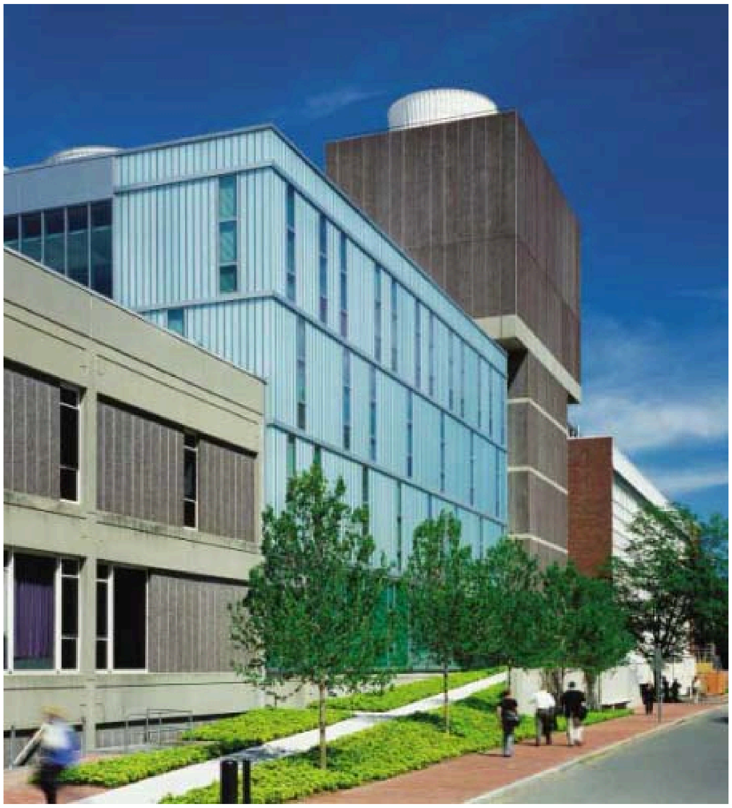
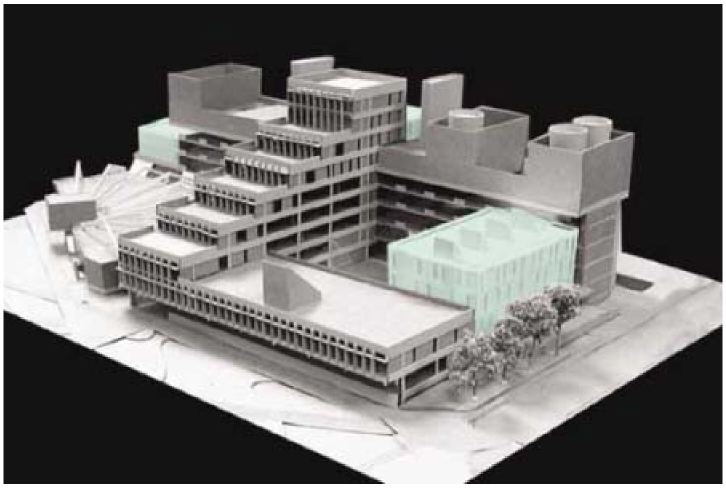


The computer science wing, which sits above a popular entry for the Science Center, gleams against the backdrop of Sert's concrete volumes (this page). The history of science wing harmonizes nicely with the center's terraced orthogonal masses (opposite).

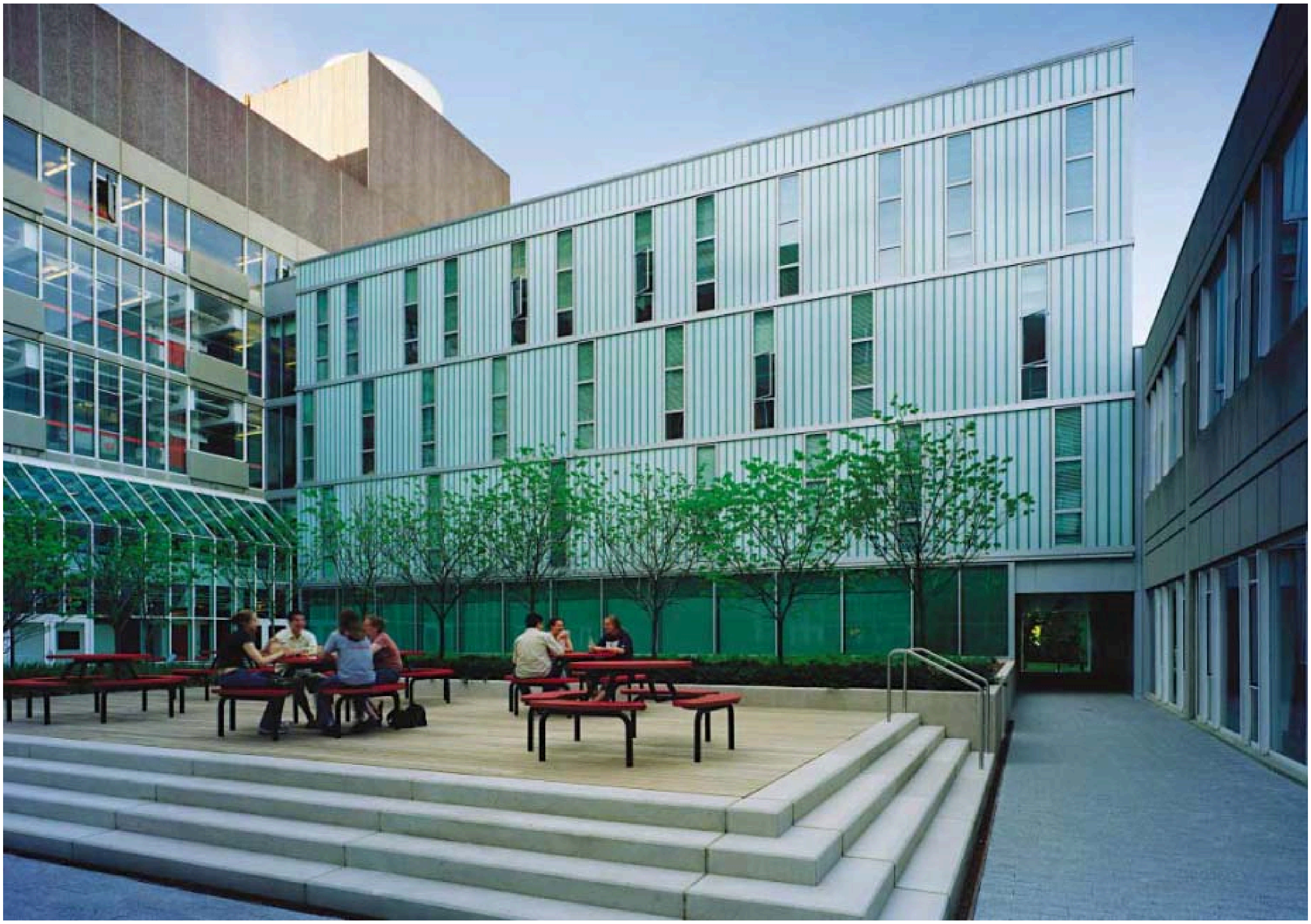
The earthwork behind a low concrete wall at the ground floor of the history of science wing lends lateral stability, which helped the existing foundation to support an additional three stories.







The history of science wing is located along a popular pedestrian route that leads to the north portion of Harvard's campus (left). Its west facade overlooks the courtyard, where the school community enjoys dining al fresco on sunny days (below). A model shows where the additions lay (above); Sert himself is believed to have considered the east and west terraces of the center ripe for expansion.



PHOTOGRAPHY: COURTESY LEERS WEINZAPFEL ASSOCIATES ARCHITECTS (TOP RIGHT)

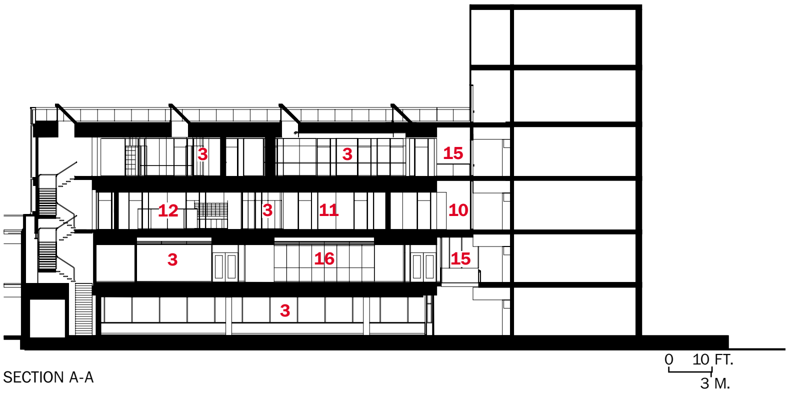
punch cards (now obsolete) and gene sequences (very of-the-moment)—apropos images for a science building.

The additions for computer science and statistics consist simply of offices and classrooms with furniture that can be configured into various seating arrangements. The history of science wing proved more complex, both programmatically and structurally. To make way for it, Leers Weinzapfel razed a single-story section of the Science Center that topped a basement mechanical room that could not be shut down or relocated. The designers worked with engineers from Arup to bolster the existing foundation so it could support four stories instead of one, which required piling earth against the ground floor for lateral stability, and other tricky engineering maneuvers.

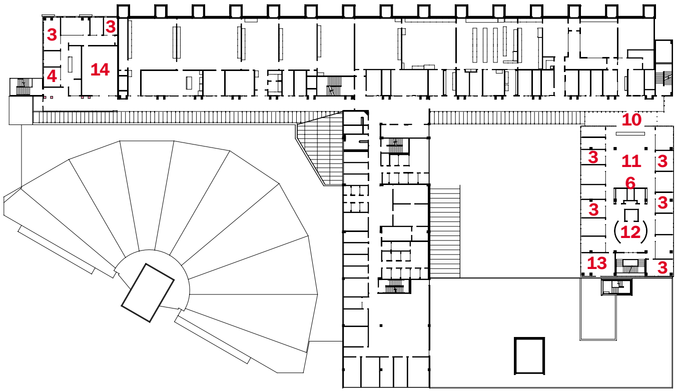
In this new wing, glass walls enclosing the ground-floor permanent exhibition space allow even casual passersby to peer at curious techno-gadgets from bygone eras. A double-height atrium and stair connect this floor to the one above, where a preservation lab for the collection's artifacts is bisected by a second public exhibition area. Faculty, staff, and graduate students enjoy more privacy in the upper two floors, which have more windows than the lower floors and were designed with glass partitions so that natural light can filter in as deeply as possible.

Commentary

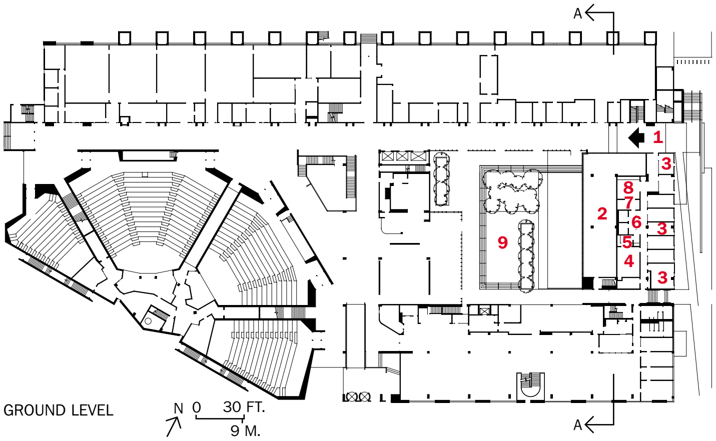
Breaking down the additions into three volumes was a wise way to resolve both formal and programmatic issues; one can easily see how a single, larger addition could have thrown off the precarious balance of Sert's dynamic volumes, not to mention the possibility of creating departmental turf wars. While sleek additions sometimes make older buildings seem shabby in comparison, these do the opposite, enlivening the center and helping it age gracefully. The interiors, while lacking pizzazz in some places, are handsomely crafted and finished. ■



SECTION A-A



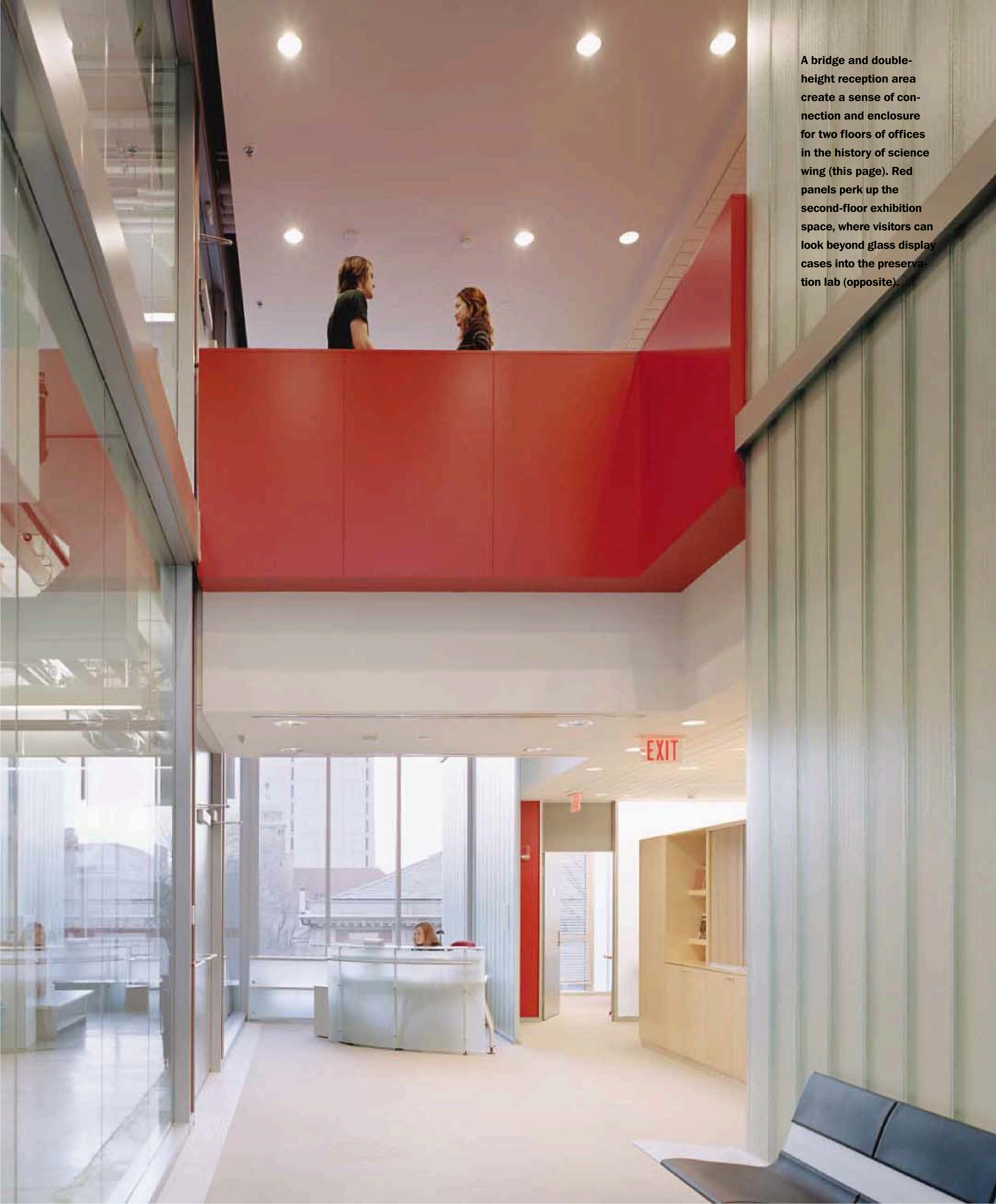
THIRD LEVEL



GROUND LEVEL

1. *Entry*
2. *Exhibition space*
3. *Private office*
4. *Conference room*
5. *Kitchen*
6. *Bathroom*
7. *Storage*
8. *Workroom*
9. *Courtyard*
10. *Reception*
11. *Open-plan office*
12. *Common room*
13. *Seminar room*
14. *Classroom*
15. *Bridge*
16. *Conservation lab*

PHOTOGRAPHY: © PETER AARON/ESTO



A bridge and double-height reception area create a sense of connection and enclosure for two floors of offices in the history of science wing (this page). Red panels perk up the second-floor exhibition space, where visitors can look beyond glass display cases into the preservation lab (opposite).

Seminar II Building, The Evergreen State College

Olympia, Washington

3

MAHLUM ARCHITECTS DESIGNS FIVE LINKED STRUCTURES THAT FORM AN INTIMATE LEARNING COMMUNITY AND PRESERVE A FORESTED SETTING.

By John Pastier

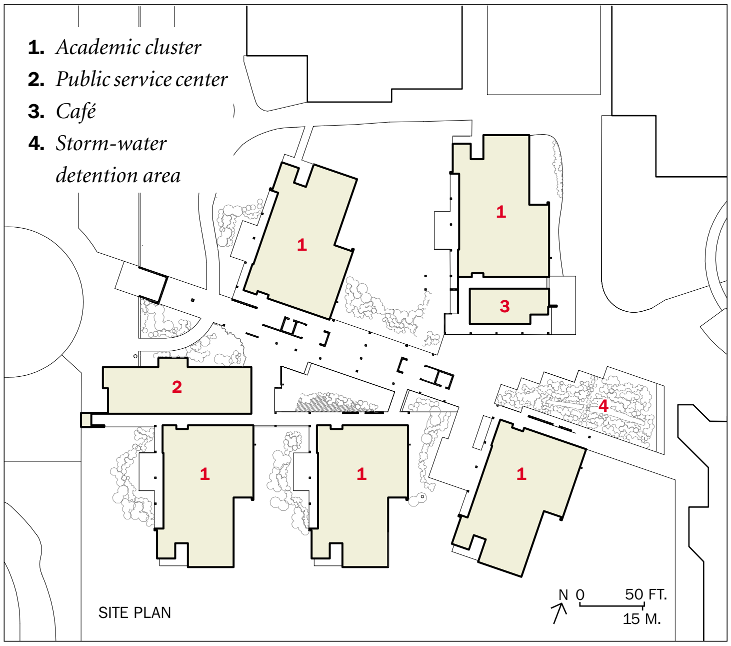
Architect: *Mahlum Architects—Anne Schopf, AIA, design principal; Michael Patterson, AIA, project manager; Mark Cork, AIA, Benjamin Doty, AIA, project architects*
Client: *The Evergreen State College*
Engineers: *AHBL (structural); Keen Engineering (mechanical modeling); Wood Harbinger (mechanical systems); SvR Design (civil); Sparling (electrical)*
Consultants: *Murase Associates (landscape); Candela (lighting); The Greenbush Group (acoustical and a/v)*
Contractor: *DPR Construction*

Size: *168,000 square*
Cost: *$32.5 million*
Completion date: *September 2004*

Sources
Concrete: *McClone Construction*
Exterior composite-wood paneling: *Finland Color Plywood*
Green roofs: *Garland*
Channel glass: *Pilkington*
Skylights: *Kawneer*
Aluminum windows: *Kawneer*
Acoustical ceilings: *Armstrong*
Raised flooring: *Interface Architectural Resources*
Cork flooring: *Expanko*
Carpet tiles: *Collins & Aikmen*
Fabric wall coverings: *Maharam*

For more information on this project, go to Building Types Study at **www.architecturalrecord.com**.

While not the newest campus in Washington's public higher-education system, The Evergreen State College is still the state's most experimental and unconventional one. The school offers intriguing multidisciplinary courses, subject concentrations rather than academic majors, and personalized evaluations in lieu of letter grades. Environmental advocacy and social responsibility lie at the core of many of its programs. Founded in 1971 and sited in a secluded, forested setting near Olympia, the school's concrete Brutalist buildings, typical of college architecture of the era, were built before Evergreen's identity was clearly defined. The Seminar II Building, designed by Seattle's Mahlum Architects, is the first major new structure on campus in 33 years and the first to properly reflect and serve its academic program.



Program

The university wanted a multifunctional building on an infill site southeast of the library and the main campus plaza, known affectionately as "Red Square." The building's program was ambitious, encompassing lecture halls, classrooms, seminar rooms, faculty and administrative offices, informal breakout spaces, outdoor teaching areas, labs, studios, and a café. School officials mandated that the structure be both flexible and sustainable, incorporating daylighting and natural ventilation and preserving the natural setting.

Solution

Mahlum Architects accommodated the complex program in five linked, nearly identical, semi-independent buildings, or academic clusters, totaling 168,000 square feet. Three of the clusters reflect the main campus grid, whereas two are aligned with the compass to offer views of the site and capture daylight.

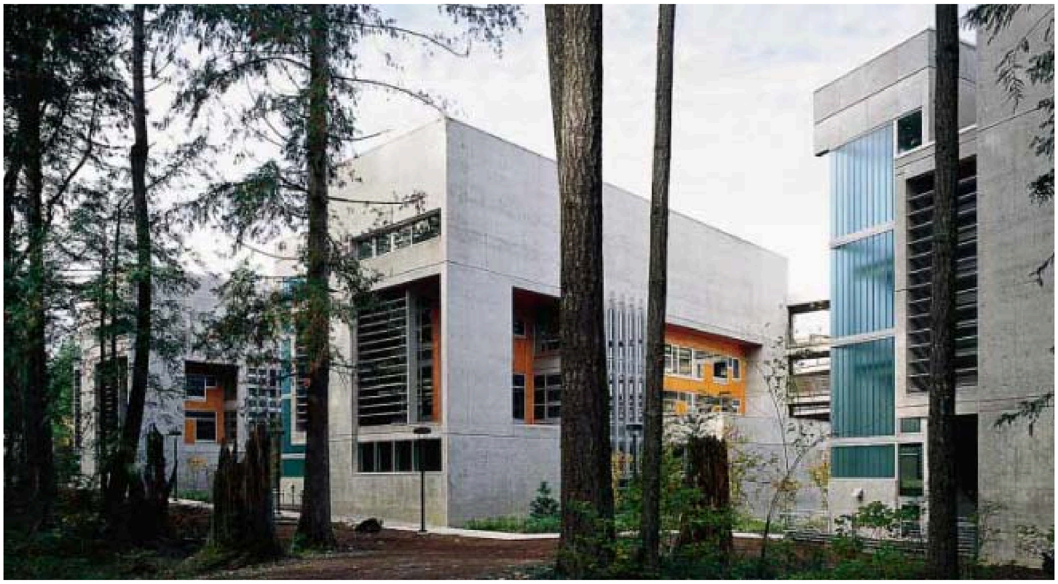
To a large extent, the arrangement of spaces within each cluster is simply the program's bubble diagram stacked vertically. Lecture halls, workshop areas, outdoor classrooms, and breakout spaces occupy the ground levels; the upper floors contain offices, green roofs, and a variety of teaching spaces, studios, labs, and formal and informal gathering areas. Open central shafts line one side of the main corridor of each cluster, providing natural light and ventilation and establishing visual links among different floors and programs.

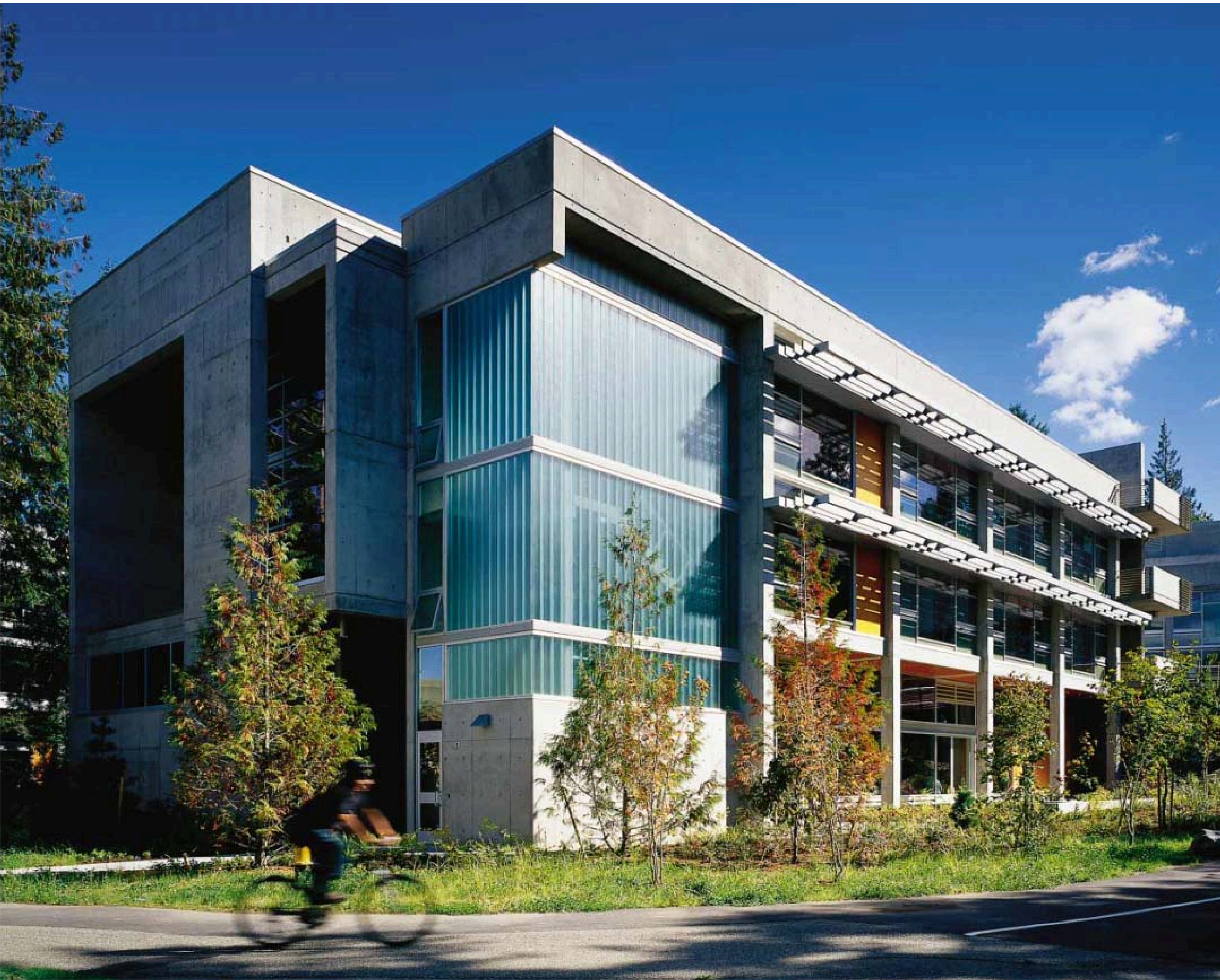
The buildings take a rigorously orthogonal form, with nary a whimsical angle, curve, or gestural arc. Cast-in-place concrete dominates

John Pastier is a Seattle-based architectural writer whose work has been published in the U.S. and abroad.

PHOTOGRAPHY: © LARA SWIMMER/ESTO

Seminar II's five linked structures are arranged in a finger-like plan to preserve the site (photo, right, and plan, opposite). Generous expanses of windows and channel glass break down the orthogonal masses of concrete (below).





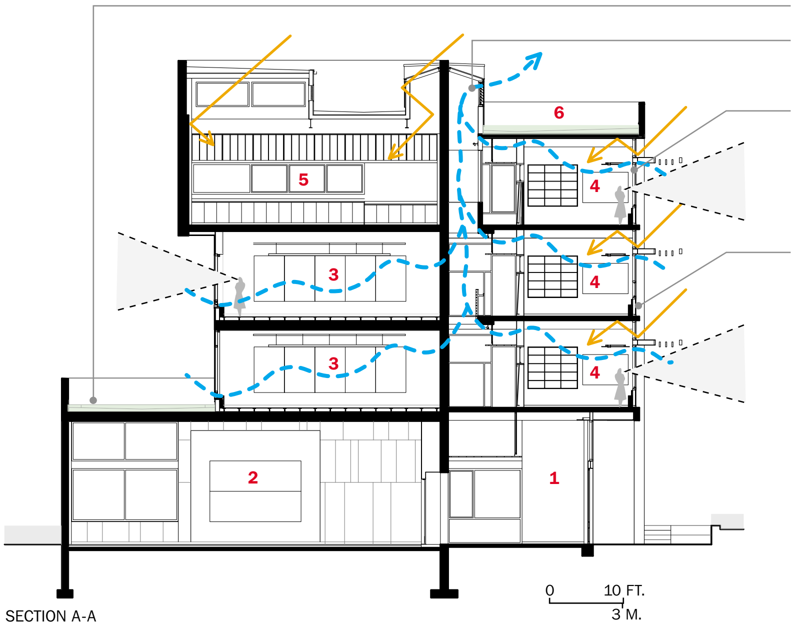
the exterior and interior material palette. Outside, the concrete is softened in places by windows, stairwells enclosed in channel glass, metal light shelves and brise-soleils, and warm-toned composite-wood panels. Inside, the architects added warmth and texture by using cork and carpeted floors in classrooms and offices, along with alder-wood accents on doors, trim, and ceilings.

The designers achieved sustainability through several means. The green roofs on each cluster, and an on-site detention pond, absorb most runoff. Eighty percent of the building is naturally ventilated, and occupied spaces have access to natural light via operable windows. Vertical and horizontal sunshades prevent heat gain during warmer months, while the concrete mass of the building also acts as a heat sink to keep things cool inside. Robert Murase's landscaping, which relies on native plantings, requires no irrigation.

Commentary

Seminar II epitomizes Evergreen State's esprit de corps better than any other building on the campus, and the school community has embraced it. Rob Knapp, a physics professor who helped administer the project, says, "The teaching spaces are inviting and pleasant, and they help retain the students' attention. The big surprise was how beautiful it is. We didn't expect the beauty of the proportions, materials, and spaces, treated with such care. We've managed to get a building with lots of poetry in it."

The poetry is undeniable, but often subtle and spare. Seminar II is like a gifted but strict teacher—an asset to the school community, but sometimes lacking in warmth. Some touches of applied color inside, or even a bit of ivy on the exterior, would help. This proudly Cartesian building cluster is a rigorous and tough-minded design exercise, but it delivers the goods. It's an apt metaphor for academic seriousness, which will help dispel a common perception among outsiders that Evergreen State is a "touchy-feely" school. ■



SECTION A-A

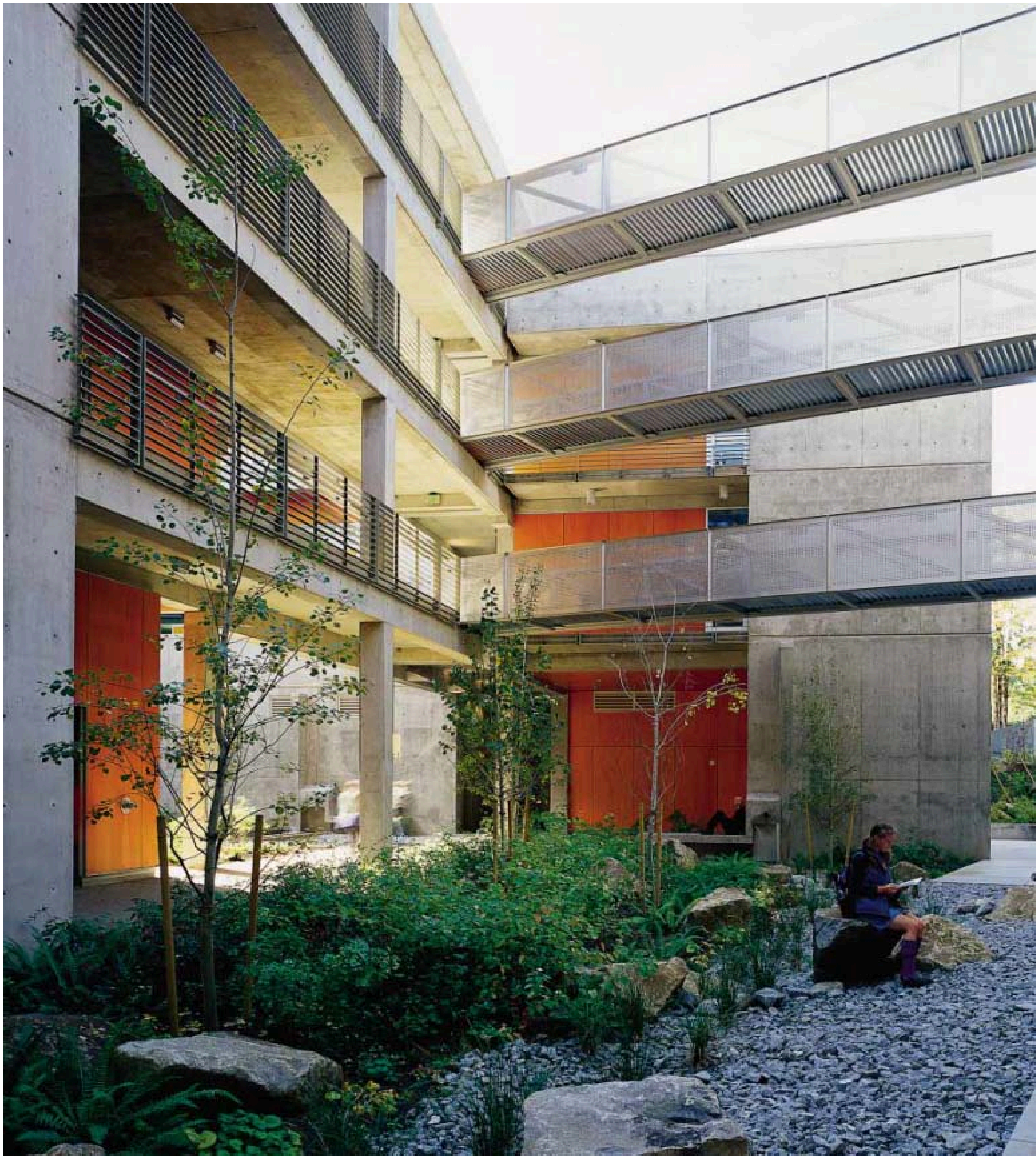
Green roofs mitigate runoff.

Operable windows and a central air shaft vent hot air via the stack effect.

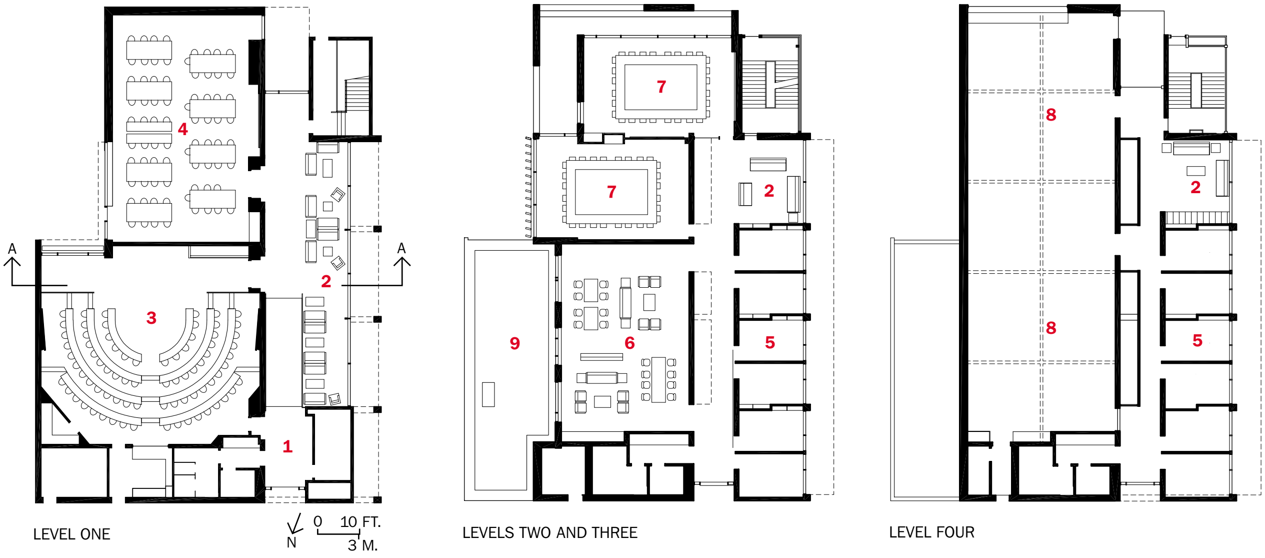
Occupied spaces have access to natural light and operable windows.

Perimeter radiation and radiant floors provide warmth.

1. *Breakout space*
2. *Lecture hall*
3. *Student homeroom*
4. *Office*
5. *Classroom/lab*
6. *Green roof*



1. *Entry*
2. *Breakout space*
3. *Lecture hall*
4. *Workshop area*
5. *Office*
6. *Student homeroom*
7. *Seminar room*
8. *Green roof*
9. *Classroom/lab*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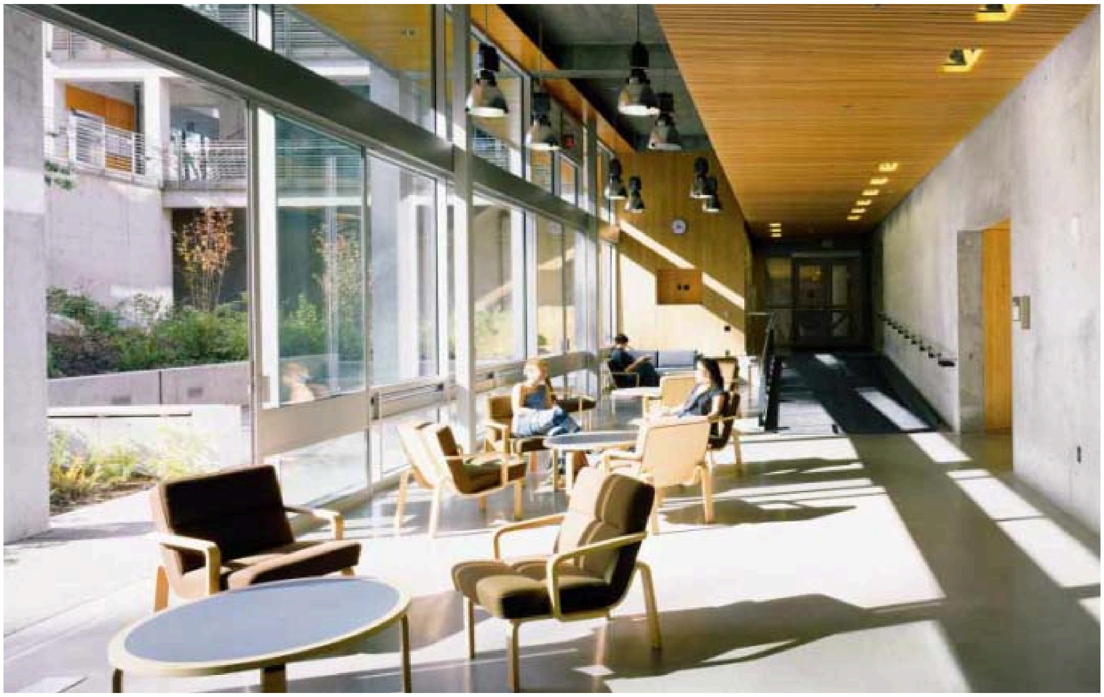
LEVEL FOUR

A system of open walkways, stairs, and bridges link the five structures (opposite), and outdoor classrooms and gathering areas feature a landscape design of native species. Accents of alder wood help to soften the interior spaces (right). Students and faculty enjoy abundant natural light and outdoor views from inside, even from classrooms (below).



Chandler-Gilbert Community College Student Center

Chandler, Arizona

4

ARCHITEKTON DESIGNS A FRONT PORCH FOR A GROWING CAMPUS, CREATING AN INDOOR/OUTDOOR ROOM WHERE STUDENTS AND FACULTY CAN GATHER.

By Clifford A. Pearson

Architect: *Architekton—John Kane, AIA, design principal; Douglas Brown, AIA, managing principal; Christopher Kelly, senior design architect; Bill Osborne, project manager; Nick Nevels, project architect*
Client: *Maricopa County Community College District*
Interior designer: *Knipp Design Associates*
Engineers: *Martin, Peltyn & Gordon (structural and civil); Energy Systems Design (m/e/p)*
Consultants: *Terrano Landscape Architects (landscape); R.C. Lurie (lighting); Thinking Caps Design (signage/wayfinding)*
General contractor: *Brignall Construction*

Size: *20,000 square feet (conditioned); 30,800 square feet (total)*
Cost: *$2.2 million*
Completion date: *Spring 2003*

Sources
Masonry: *Western Block*
Curtain wall: *Arcadia*
Elastomeric roofing: *Carlisle*
Glass: *Old Castle*
Garage doors: *Clopay*
Ceiling fans: *Big Ass Fans*

For more information on this project, go to Building Types Study at ***www.architecturalrecord.com***.

Part of the enormous Maricopa Community Colleges, which comprise 10 campuses and 280,000 students, Chandler-Gilbert Community College (CGCC) serves the fast-growing East Valley of Phoenix. During the past decade, the area has traded agricultural jobs for employment in light manufacturing and high-tech industries, doubling the size of the city of Chandler since 1990 and fueling demand for educational facilities of all kinds.

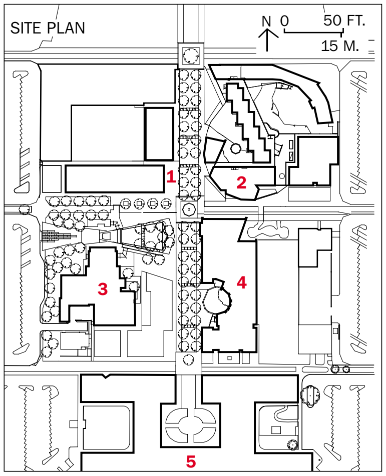
Program

Like many schools that have expanded quickly, CGCC had emphasized classroom buildings and specific-use facilities such as libraries, gyms, and arts centers. But its Pecos campus (one of three in the college) had no space where students and faculty could come together in an informal setting. A three-day programming charrette, run by the Tempe-based firm Architekton, showed the need for a relaxed place that could accommodate a broad range of uses—from offices for career placement and student-life organizations to a venue for socializing and celebrations.

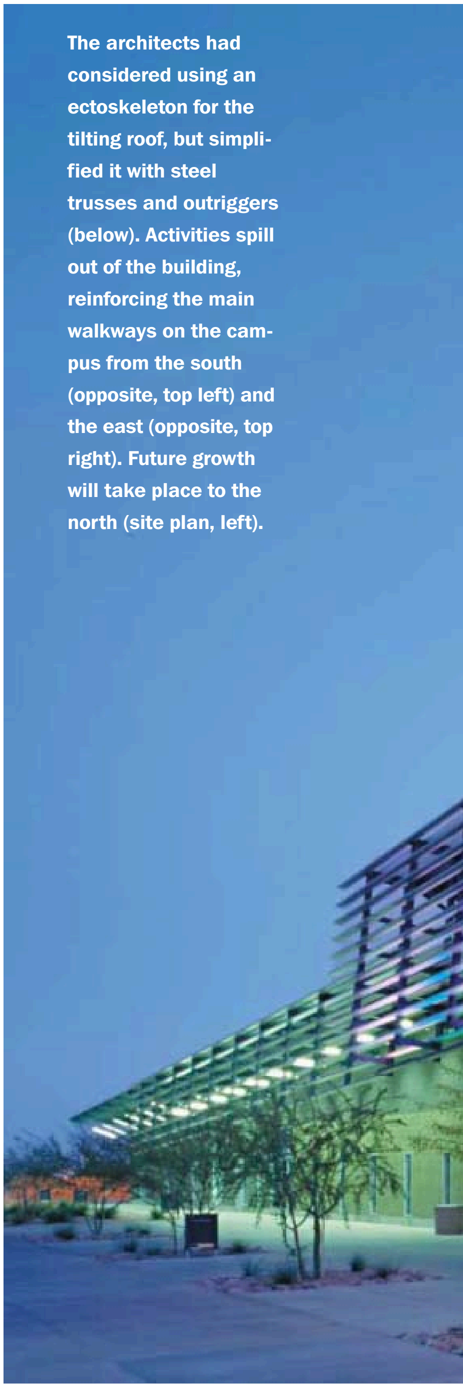
Since the first buildings opened in 1986, the school had expanded rapidly to the north, leaving the original social hub (a courtyard and classroom building) at what is now the south edge of campus. "We did a heart transplant," explains John Kane, AIA, Architekton's design principal, "by moving the center of social activity to the new building." With future growth planned to the north, the 20,000-square-foot student center designed by Architekton should serve as a hub for years to come. The particular tenants in the building, though, will probably change over time, as some find more space in future buildings. So the student center had to be remarkably flexible in terms of internal spaces, accommodating athletic-department and counseling offices for a few years and then perhaps different departments later.

Solution

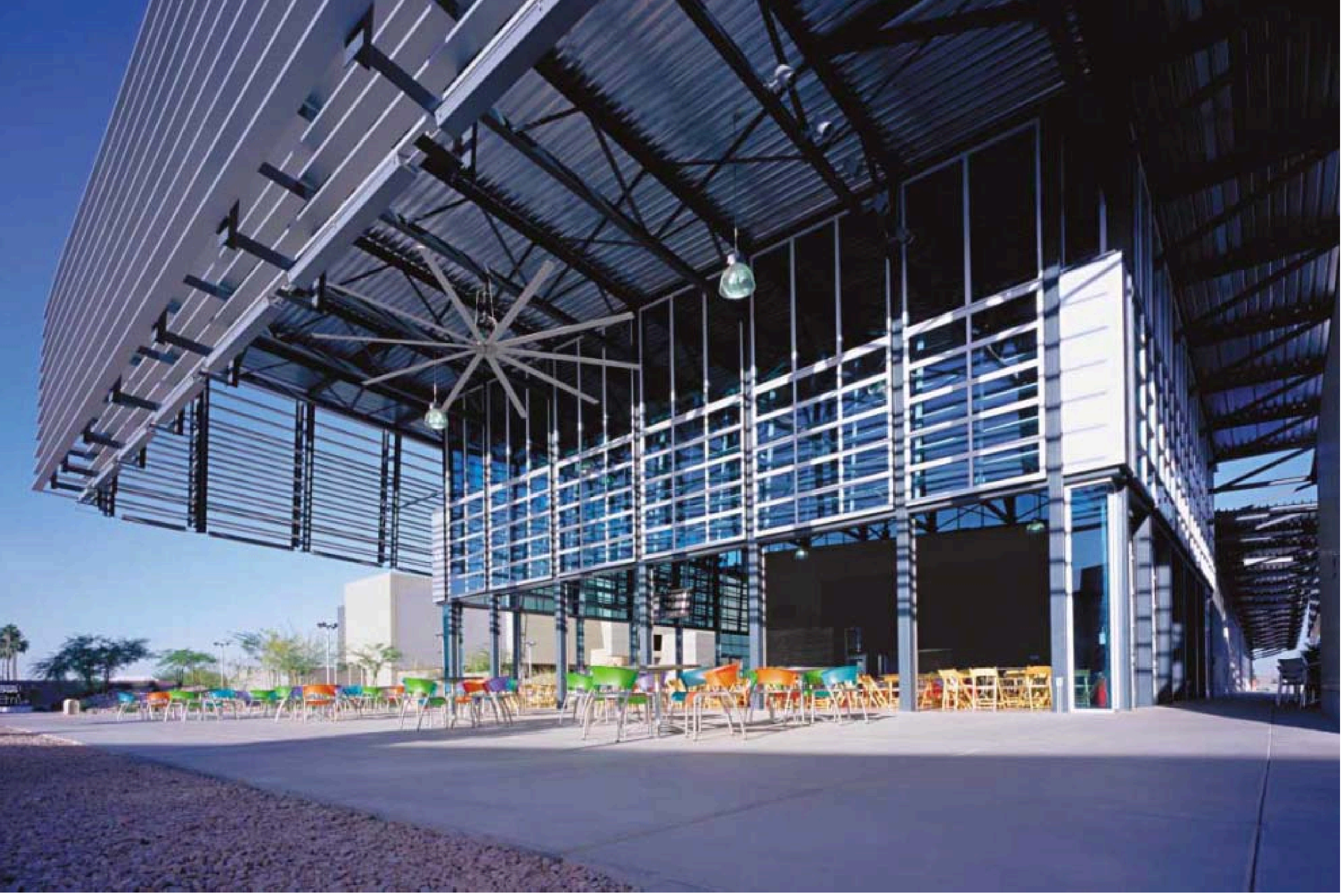
With a tight budget ($2.2 million)



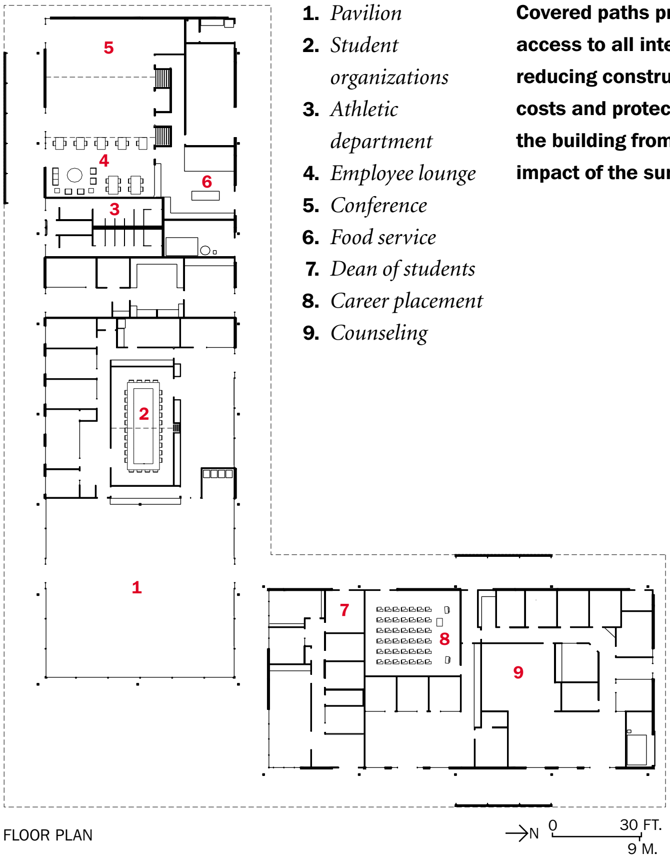
1. *Student center*
2. *Classroom building*
3. *Performing arts center*
4. *Library*
5. *Administration*


The architects had considered using an ectoskeleton for the tilting roof, but simplified it with steel trusses and outriggers (below). Activities spill out of the building, reinforcing the main walkways on the campus from the south (opposite, top left) and the east (opposite, top right). Future growth will take place to the north (site plan, left).

PHOTOGRAPHY: © BILL TIMMERMAN



Covered paths provide access to all interiors, reducing construction costs and protecting the building from the impact of the sun.



FLOOR PLAN

1. *Pavilion*
2. *Student organizations*
3. *Athletic department*
4. *Employee lounge*
5. *Conference*
6. *Food service*
7. *Dean of students*
8. *Career placement*
9. *Counseling*

and a changeable program, the architects realized they needed to develop a very simple scheme accented by one or two attention-getting moves. So they designed an L-shaped, concrete-block structure in which a walkway around the perimeter provides covered but unconditioned access to the offices and spaces inside. By tilting the roof up at the corner of the two wings and extending it out 30 feet, they created a soaring "pavilion" that can serve as a casual café or transform itself into a space for more formal celebrations. Steel outriggers project the pavilion's roof beyond that of the rest of the building, and aluminum louvers provide sun protection around the perimeter, forming a "double veil" for the corner space. Garage doors around the conditioned portion of the pavilion can roll up to make a 60-by-90-foot indoor/outdoor room. "It's like having a giant porch outside your living room," says Kane.

"Other buildings on campus are colorful, but turn inward," states Kane. "We took a different approach with our building, giving it a neutral palette of materials but opening it up to the campus walkways." At night, the student center changes personality as gels on the pendant fluorescent lights attached to the roof's outriggers bathe it in color.

With the pavilion and its porch playing starring roles, the spaces inside the student center perform in a supportive capacity. Concrete block, painted gypsum board, and movable partitions define the various rooms and give them a straightforward, utilitarian character.

Commentary

Constrained by its modest size and cost, the student center smartly draws attention to its one big feature and makes this work as both an indoor and outdoor room. And by spilling its activities outdoors, it reinforces the campus's public realm. ■

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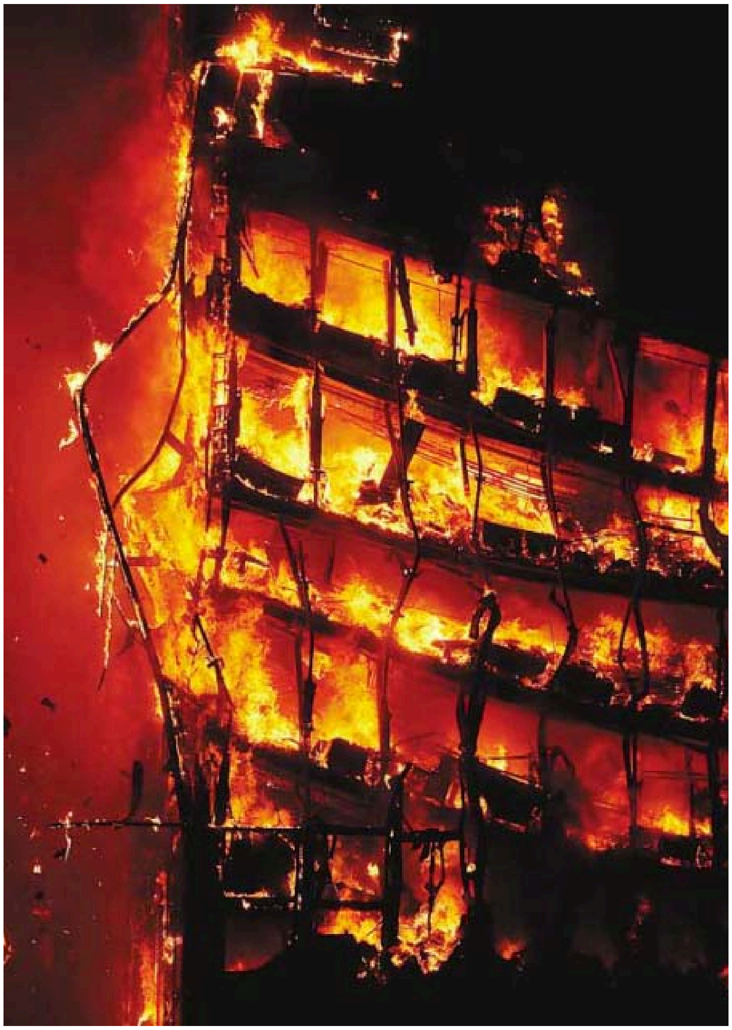
A New Era for Fire Protection and Life Safety

WHILE NIST AWAITS PUBLIC COMMENTS ABOUT ITS INVESTIGATION INTO THE CAUSES OF THE COLLAPSE OF THE WORLD TRADE CENTER TOWERS, TALL BUILDINGS CONTINUE TO RISE



In February, the 32-story Windsor tower in the business district of Madrid, Spain, burned out of control for 16 hours. Still, the structure did not collapse.

PHOTOGRAPHY: © AP PHOTO/ALVARO HERNANDEZ

By Sara Hart

On June 23, the National Institute of Standards and Technology (NIST) released a 10,000-page report on the collapse of the World Trade Center (WTC) on September 11, 2001, now starkly referred to in shorthand as 9/11. The report (available at wtc.nist.gov) was conducted over three years under the authority of the National Construction Safety Team (NCST) Act, which had been signed into law on October 1, 2002.

According to the report's executive summary, the goals of the investigation were to examine the building construction, materials, and the technical conditions that contributed to the chain of events resulting from the collision of two commercial airliners into the WTC Twin Towers. The investigation yielded a plethora of recommendations for improvements in the way buildings are designed, constructed, maintained, and inhabited, as well as suggestions for revisions to current codes, standards, and practices. Thirty recommendations are divided into the following eight groups: increased structural integrity, enhanced fire resistance of structures, new methods for fire-resistance design of structures, active fire protection, improved building evacuation, improved emergency response, improved procedures and practices, and education and training.

While these recommendations will greatly influence the course of building-code revisions for decades to come, NIST is a nonregulatory agency of the U.S. Department of Commerce with no statutory authority to assign fault or negligence or mandate code revisions. Its main mission is fact-finding, in order to improve the safety and structural integrity of all buildings. "NIST's recommendations do not contain specific language regarding proposed code or law changes, but rather areas where code, product, or policy development changes should be made or considered," explains James Quiter, ArupFire principal. Quiter chairs the High Rise Building Safety Advisory Committee, formed by the National Fire Protection Agency (NFPA) to review the report with NIST officials and formulate responses. In addition, various structural-engineering organizations, the American Institute of Architects, the Society of Fire Protection Engineers, and others have formed committees to look at and respond to the report. Several of the major engineering firms, including Arup, have also formed in-house review groups to coordinate official responses to the report.

The overall impact of the report remains to be seen. There are some recommendations, which, if taken to their fullest extent, could have substantial ramifications for tall-building design. Several recommendations have already been implemented independently. There are still others that will need to wait for further development of new products, but as Skidmore, Owings and Merrill's (SOM) technical architecture partner, Carl Galioto, FAIA, predicts, the issuance of the report may spur that development.

CONTINUING EDUCATION

Use the following learning objectives to focus your study while reading this month's ARCHITECTURAL RECORD/ AIA Continuing Education article. To receive credit, turn to page 146 and follow the instructions.

LEARNING OBJECTIVES

After reading this article, you should be able to:

1. *Discuss increasing construction and design requirements for high-rise buildings.*
2. *Explain the concept of three rings of defense for high-rise buildings.*
3. *Describe methods of redundancy and diversity for defense of buildings.*

For this story and more continuing education, as well as links to sources, white papers, and products, go to ***www.architecturalrecord.com***.

Life-safety features at Seven World Trade Center have been made robust by redundancies and diversity of systems. Fireproofing on the structural steel and the automatic sprinkler system on each floor exceeds existing codes in strength and capacity, respectively. Double-capacity water tanks and dual fire standpipes serving alternate floors create secondary protection by automatic sprinklers if any standpipes are compromised.

In the meantime, tall buildings continue to rise. There are 96 high-rise buildings under construction in New York City, according to Emporis, an information provider with a focus on high-rise buildings (12 floors and more). Until the codes change to reflect the NIST recommendations, decisions about how far a project should go beyond complying with existing codes is left to the architects, engineers, and owners who design and pay for them. Safety issues notwithstanding, their choices continue to be influenced by economics, building use, location, and in the case of post-9/11 New York, the public profile of the building.

A phoenix rises

Seven World Trade Center (7WTC) was the last building to collapse on September 11, 2001, after burning for seven hours. Today, it's the first to be rebuilt at Ground Zero. The 52-story building, designed by the New York office of SOM for Silverstein Properties, will enclose 1.7 million square feet of commercial office space.

SOM, structural engineers WSP Cantor-Seinuk, and m/e/p and fire-protection engineers Jaros, Baum & Bolles examined a host of options as they developed a plan for 7WTC. SOM's Galioto describes the team's strategy for designing a structure at Ground Zero, a site with arguably the world's most infamous parcel of real estate, as comprising three concentric rings of defense—suppression, protection, and evacuation. Within each ring, the design team fortified life-safety features by inserting what Galioto refers to as *redundancy* and *diversity*, in an effort to ensure, as much as is technologically possible, continuous performance of all systems in every likely circumstance.

"The first ring of defense calls for suppressing the fire where it starts, creating greater opportunity for evacuation and less property damage," Galioto explains. In the wake of 9/11, fire experts have raised concerns about the reliability, or rather the vulnerability, of sprinkler systems. SOM has rigorously applied the principles of redundancy and diversity to mitigate these concerns. "With regard to redundancy, we followed several courses simultaneously. We increased the density of sprinkler heads, constituting an upgrade from 'light hazard' to 'ordinary hazard.'" (The 2002 *NFPA 13* handbook of "Codes and Standards" classifies types of hazards requiring sprinklers as light, ordinary, or high.)

The second redundancy addresses the reliability of water supply to the sprinklers. Most building codes require only one riser to feed all the sprinklers. SOM doubled the supply by inserting a separate standpipe in both stairwells. Each supply alternates floors: One provides water to the

The steel members are sprayed with a robust, medium-density, portland-cement-based fireproofing that has a bond strength of 2,000 psf and a minimum density of 22 pcf, resulting in a compressive strength many times greater than that which is required by New York City building codes.

PHOTOGRAPHY: COURTESY GRACE CONSTRUCTION PRODUCTS (THIS SPREAD)

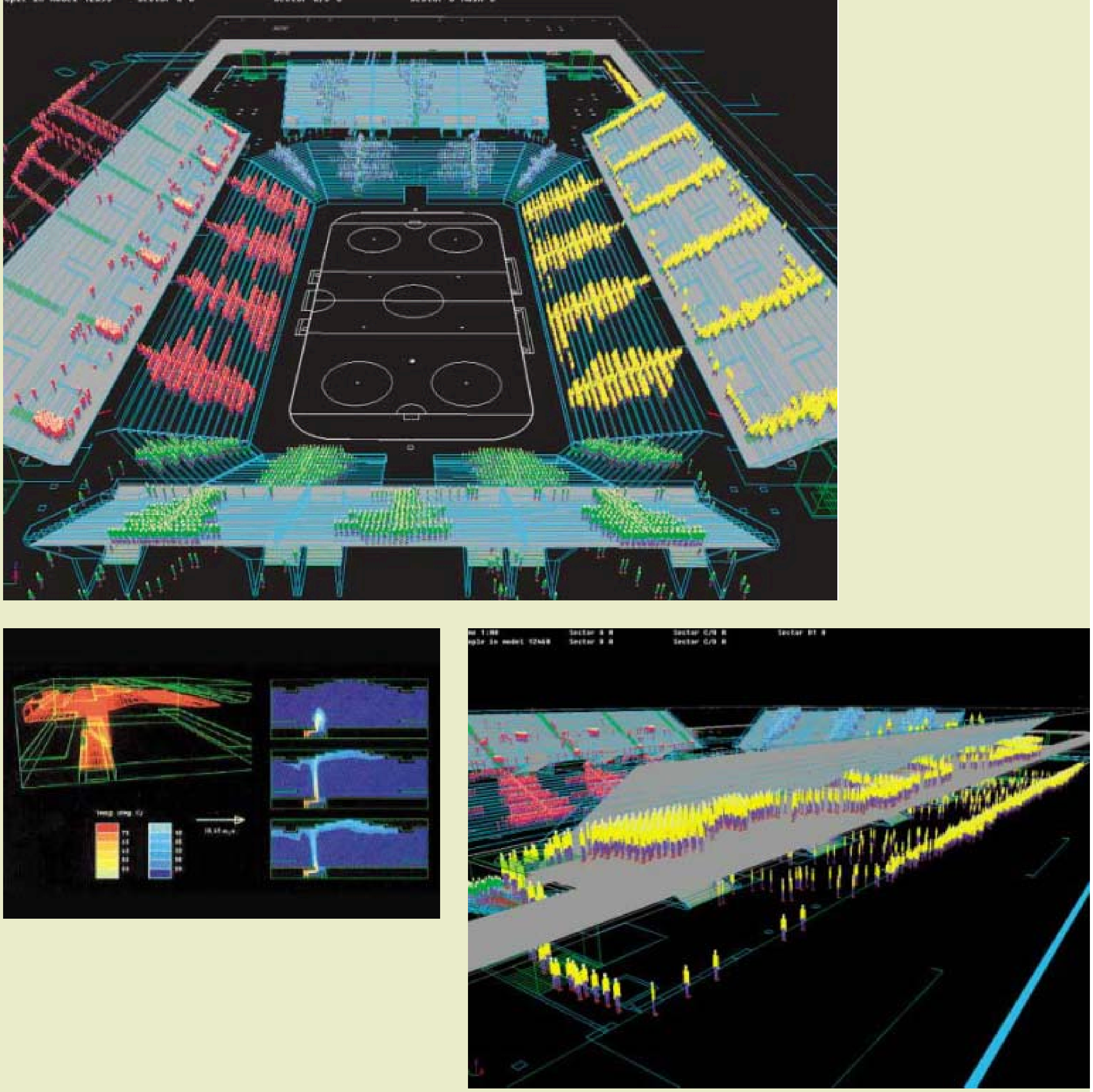
even-numbered floors, the other to the odd-numbered ones. “This ensures that if one fails, no two consecutive floors will be without water,” he continues, thus increasing the ability to suppress the vertical spread of the fire. “There has never been a fire in a high-rise commercial building in the U.S. that has spread in this manner if the sprinklers were functioning properly.” He cites the fierce 1991 Meridian Plaza fire in Philadelphia as an example. “The building was in the process of having a sprinkler system installed. The fire spread vertically through the floors where sprinklers had not been installed. When it reached the levels where new sprinklers were operative, the fire was suppressed.”

THREE CONCENTRIC RINGS OF DEFENSE REPRESENT THE ESTABLISHED TRINITY OF FIRE PROTECTION—SUPPRESSION, PROTECTION, AND EVACUATION.

At 7WTC, the two risers are interconnected at the top and bottom of the building, creating a loop. “If there were two completely independent risers, then a break in one riser would cut off water to every floor,” explains Galioto. “With a system of valve isolation, the loss of sprinkler protection could be limited to a section of the riser, and the water could still be supplied from above and below the break.” If the water supply is ruptured at a point along the loop, breach-control values automatically engage to prevent the system from draining out. Diversity is achieved by specifying, rather than a single tank, multiple tanks in various locations throughout the building. In addition, whereas the code requires a 30-minute supply of water, the 7WTC system doubles the output to an hour.

The second ring of defense addresses protection of the structure. 7WTC is a steel structure with a concrete core. Spray-applied fire-resistant materials (SFRM) are the standard method of passive fire protection for steel. It goes without saying that fireproofing is only effective if it stays adhered to the structure. Unfortunately, building-performance analysis of the World Trade Center towers on 9/11 showed that the impact of the aircrafts dislodged the fireproofing materials on the steel columns, exposing them to extreme heat.

In response, the 7WTC team carefully considered the properties of existing SFRM products. There are two factors determining performance of SFRM—density and bond strength. Density refers to the amount



Egress Modeling

ArupFire uses STEPS (Simulation of Transient Evacuation and Pedestrian Movements), a three-dimensional people-movement-simulation program that models evacuation. STEPS enables the user to model the building three-dimensionally. The graphics allow the user to visually identify occupant flows, queuing, and overall efficiency of the proposed evacuation route. STEPS is often used in conjunction with three-dimensional smoke and fire modeling using Computational Fluid Dynamics (CFD) software.

of mass per unit volume. Bond strength refers to the amount of force required to separate the fireproofing from the steel. SOM sought a material with strength and adhesion superior to that required by the New York City code, and selected a medium-density, portland-cement-based product called Monokote Z-106/HY from Grace Construction Products. Galioto is confident that manufacturer's claims that the product's bond and compressive strengths are five times higher than the building-code requirements for steel structures are correct.

THE CORES ARE HIGH-STRENGTH, REINFORCED, POURED-IN-PLACE CONCRETE, VARYING FROM 12 TO 28 INCHES THICK.

The design team did not rely solely on superior fireproofing for structural protection. The elevator and stair cores are high-strength, reinforced, poured-in-place-concrete enclosures, varying in thickness from 12 to 28 inches depending on floor level. The issues regarding the cores lead directly to the third ring of defense—evacuation, which takes place, of course, inside the cores. The first improvement was simple enough—increase the space by making the stairwells 20 percent wider than the code requires. The goal was to increase the flow of occupants out of the building without impeding the counterflow of emergency responders rushing in.

While it's a given that stairwells, regardless of width, must remain clear of smoke, there are different schools of thought on the best way to achieve this. Galioto says that New York City codes show a preference for purging smoke that migrates into the stairwells via a ventilation system. SOM went a step further and adopted the International Building Code, which, unlike New York City's current regulations, requires both ventilation and pressurization. At 7WTC, in addition to an exhaust system, air will be forced into the stairwells, creating a positive pressure within the enclosure, thus preventing most smoke from invading the space around door frames. In addition, the fire department will control the system by regulating both pressurization and exhaust, depending on actual conditions.

The team made every effort to guarantee uninterrupted lighting in the stairwells. Local codes require that stairwells in commercial buildings be finished with photo-luminescent paint that will glow in the dark in the event of total power failure. The engineers added a redundancy between the generators and the paint and backed up the generators

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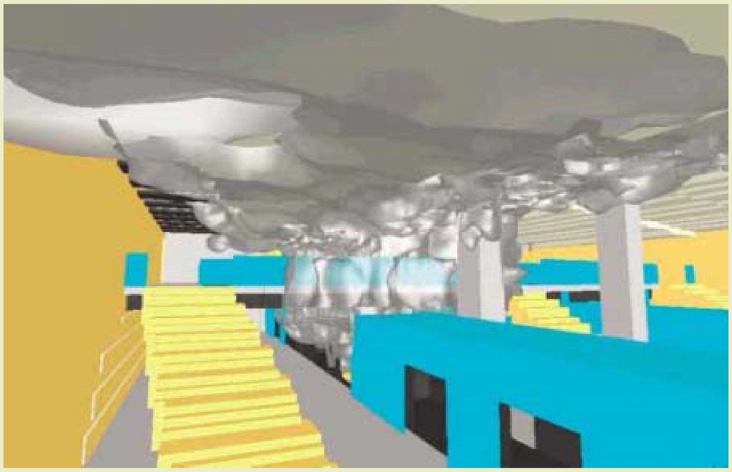
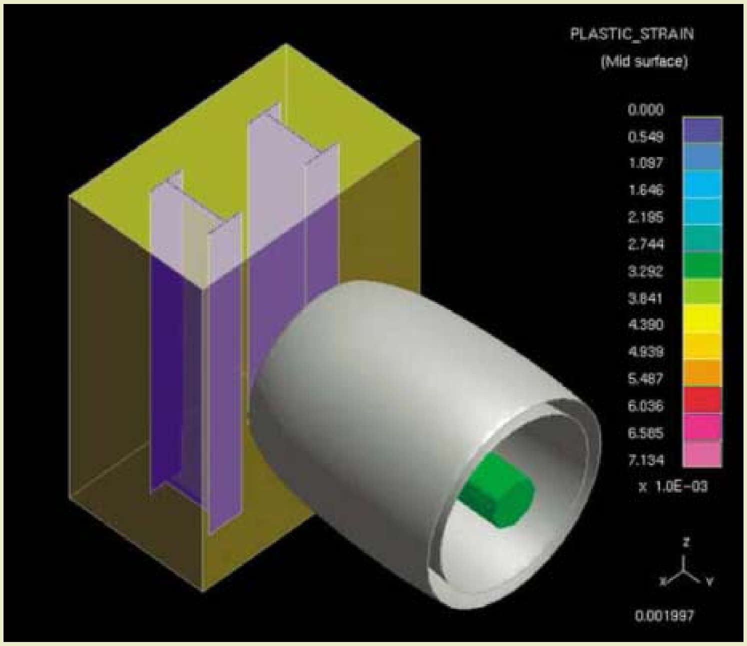
Modeling and Testing

Fire Protection Engineers have numerous tools at their disposal to address fire/life safety challenges. Computational fluid dynamics (CFD) models produce a detailed picture of smoke and fire conditions, such as temperature, toxicity, and visibility. A fire test (bottom right) was performed to verify that a design involving structural elements filled with water could provide cooling of the structure, as well as a water supply for the sprinklers.





with a battery-powered source.

The stairs reach a transfer level toward the base on the building. At this juncture, the two stairwells split into four at the building's perimeters, in order for occupants to exit directly to grade, rather than into the public lobby. At the transfer level, interactive signs direct occupants to specific paths of egress. And as with all the life-safety features, the signs can be manually overridden by the fire department, as the situation dictates.

FEATURES AT 7WTC COULD PROVIDE A PRECEDENT FOR A TREND AWAY FROM EXISTING PRESCRIPTIVE-BASED CODES TO THOSE THAT ARE PERFORMANCE-BASED.

Prescriptive- vs. performance-based

The life-safety features at 7WTC are, to a certain extent, an acknowledgement of the shift away from existing prescriptive-based codes to performance-based ones. ArupFire has done considerable work in this area and is an advocate for performance-based design. Performance-based codes are already in use in a number of countries around the world, and in the U.S., the International Code Council has developed a performance-based building code along with NFPA, which has performance options in its building code, *NFPA 5000*. Various performance-based design guides are also in use or under development: The Society of Fire Protection Engineers, for example, has developed a performance-based fire-engineering guide, and the Applied Technology Council is developing performance-based seismic-design guidance.

Brian Meacham, who leads the risk consulting business for Arup in North America, understands the primary difference between prescriptive-based and performance-based approaches: "Prescription focuses on what you need to do, and performance focuses on what outcomes you want to achieve. Prescriptive-based codes prescribe what must be designed, and in many cases how to design it, without providing any indication of the objective of the provision. For example, prescriptive egress provisions include maximum travel distances, separation distances between exits, and width of exit stairs. The design aspect is, therefore, fairly straightforward and often limited in options," he explains. Meacham believes that after 9/11, it makes more sense to incorporate performance-

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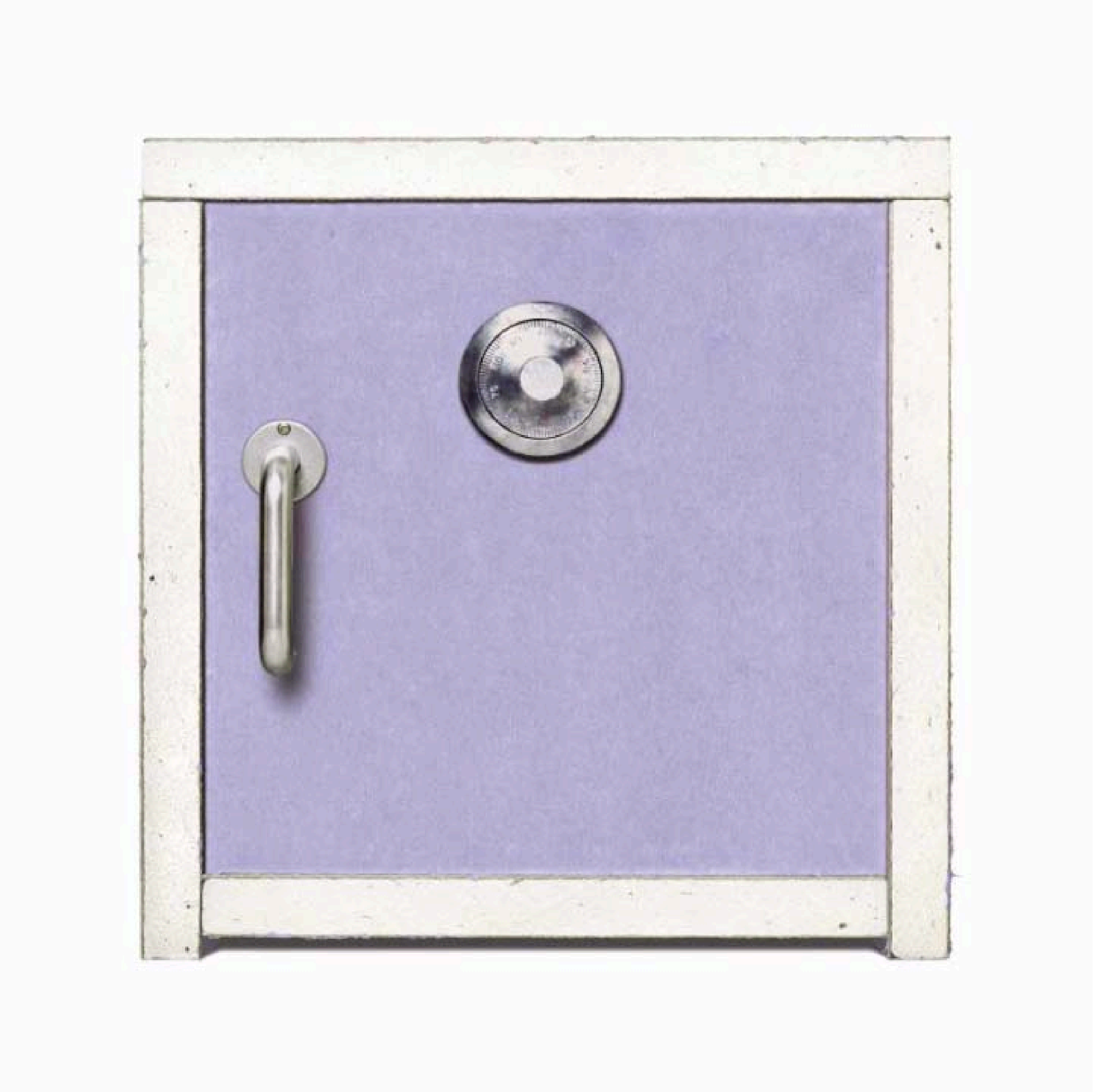

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The 1991 fire at One Meridian Plaza in Philadelphia burned for 18 hours and was only suppressed when it reached a floor that was protected by automatic sprinklers.

based approaches in both building codes and building design. A performance-based approach helps answer questions about how much fire resistance is needed, what fire-protection systems are appropriate, and what features an egress system should have. “Performance-based codes regarding egress, for example, would require the egress system to be designed with adequate capacity and protection to provide occupants with sufficient time to reach a place of safety without being exposed to untenable conditions,” he says. “By stating the desired outcome, a performance-based code requires the fire-protection engineer to assess the fire hazard, as well as the time required for egress, and to design an integrated egress solution that achieves the stated performance.”

ArupFire strategist Chris Marrion, whose special interest involves extreme events, advocates performance-based codes and adds, “Codes typically do not address extreme events such as blast, impact, and chemical/biological hazards. A threat and risk assessment for an individual building can help identify what blast, impact, and chemical or biological hazards it may be susceptible to.” These arguments for performance-based codes are applicable to all risks, but they will be useful beyond life safety in areas such as energy efficiency and conservation, curtain-wall design, and material selection. In the near future, unfortunately, the focus will remain fixed on avoiding and confronting danger. ■

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

INSTRUCTIONS

- ◆ **Read the article “A New Era for Fire Protection and Life Safety” using the learning objectives provided.**
- ◆ **Complete the questions below, then fill in your answers (page 216).**
- ◆ **Fill out and submit the AIA/CES education reporting form (page 216) or download the form at www.architecturalrecord.com to receive one AIA learning unit.**

QUESTIONS

1. Recommendations for improvement in the way buildings are designed, constructed, maintained, and inhabited were made by which group?
a. NIST
b. a regulatory agency of the Department of Commerce
c. a Department of Commerce authority
d. all of the above

2. Which of these is not included in the concept of concentric rings of defense?
a. fire suppression
b. armament of occupants
c. evacuation of occupants
d. protection of the structure

3. In this defense concept, there is a greater opportunity for evacuation and less property damage if which is in place?
a. good egress routes
b. good alarm systems
c. good fire-suppression systems
d. good emergency lighting

4. Which is not a part of the redundancy and diversity plan for sprinklers at 7WTC?
a. two completely independent risers
b. two looped risers
c. increased density of sprinkler heads
d. water supply increased from 30 minutes to an hour

5. How will smoke be purged from stairwells at 7WTC?
a. by ventilation
b. by ventilation and pressurization
c. by exhaust
d. by controlled pressurization

6. The stairwells at 7WTC are illuminated by which method?
a. generator
b. battery
c. photo-luminescent paint
d. all of the above

7. The stairwells at 7WTC exit to what area?
a. lobby
b. transfer level
c. parking garage
d. grade level at exterior

8. According to this article, the life-safety features at 7WTC might provide a precedent for adopting which type of building codes?
a. prescriptive-based
b. performance-based
c. New York City codes
d. International Building Codes

9. A code that states the desired outcome is which type?
a. prescriptive-based
b. performance-based
c. variance-based
d. descriptive-based

10. At 7WTC, the New York fire department can override all except which fire-protection device?
a. interactive exit signs
b. stairwell exhaust
c. sprinkler valves
d. fireproofing on the steel columns

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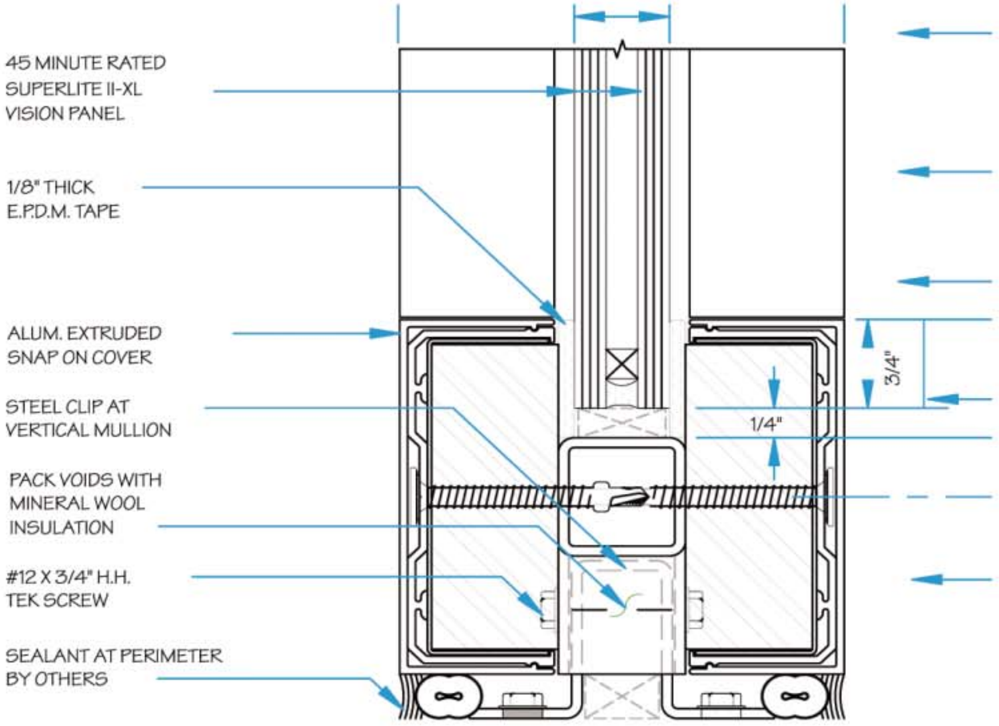
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Tech Briefs

Seismic framing technology and smart siting aid a California community college

Lighting animates the health sciences building and emphasizes its angles.

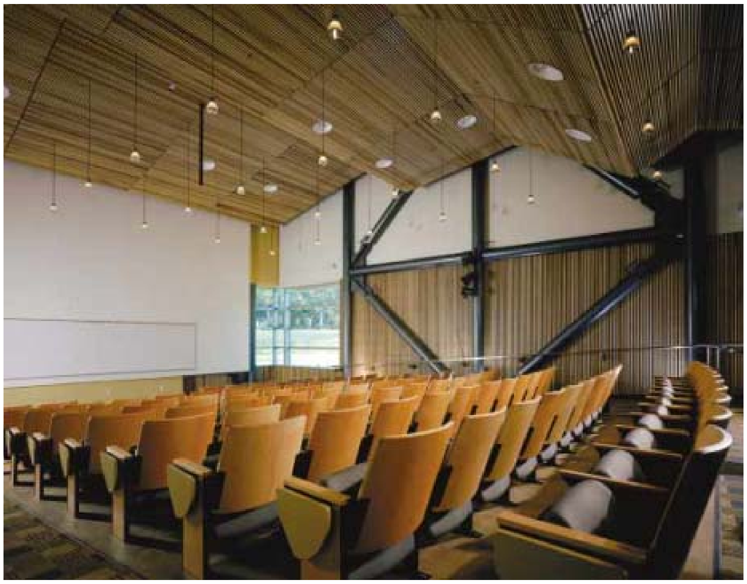
Several years ago, during a seismic study of the San Bernardino Valley College (SBVC) in California, engineers discovered that a portion of the San Jacinto fault, a branch of the San Andreas fault system, lay right underneath the school's campus—endangering the integrity of nearby buildings and threatening the safety of students and faculty. With the help of design architect Steven Ehrlich Associates, along with engineers at Arup and associate architect Thomas Blurock Architects, SBVC recently opened three new buildings that employ unbonded brace frames, or buckling-resistant frames, as they've come to be known, a Japanese technology that's been making inroads in U.S. seismic design for the past five to six years. The new buildings are part of a larger master plan and rebuilding effort that reflects and even celebrates the existence of the fault under SBVC's 60-acre campus.

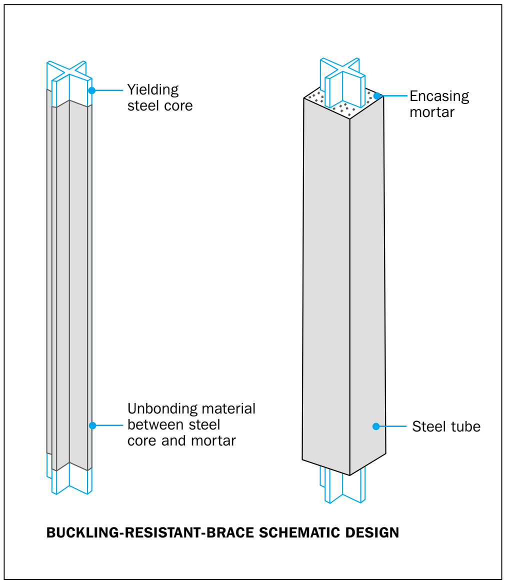
More strength, less material

The three new structures—a health and life sciences center, a library and learning center, and an administrative and student services building—opened earlier this year. (An arts center and campus center, also designed by Ehrlich and his collaborators, are slated for completion in 2006.) They share a common material language of structural steel, glass and metal panels, and stucco cladding; their angular, dynamic volumes, folded roof plates, and triangular forms are meant to suggest the plate tectonics of the shifting ground planes they sit on. "This was a unique opportunity for the architects and the college to change an entire campus with a consistent voice," Ehrlich says. He and his collaborators worked closely with the SBVC community to solicit input on what the new structures should look like.

All the buildings are framed in structural steel, made in the U.S., and augmented with the buckling-resistant braces, which were made in Japan. Unlike typical structural steel braces, buckling-resistant braces perform as well in compression as they do in tension. The brace consists of a steel core, typically in a cruciform shape, slipped inside a steel sleeve or tube filled with lightweight mortar. A special coating is applied to the core steel so that it doesn't adhere to the mortar, meaning the core can slide back and forth, much like a piston, inside the tube. When tension forces are applied, the brace can elongate like a traditional brace as the core slides within the tube. When hit with compression forces, the combination of the mortar and steel core provides enough stiffness and strength to prevent the brace from buckling, which can reduce the stiffness and strength of the entire building, leading to catastrophic collapses.

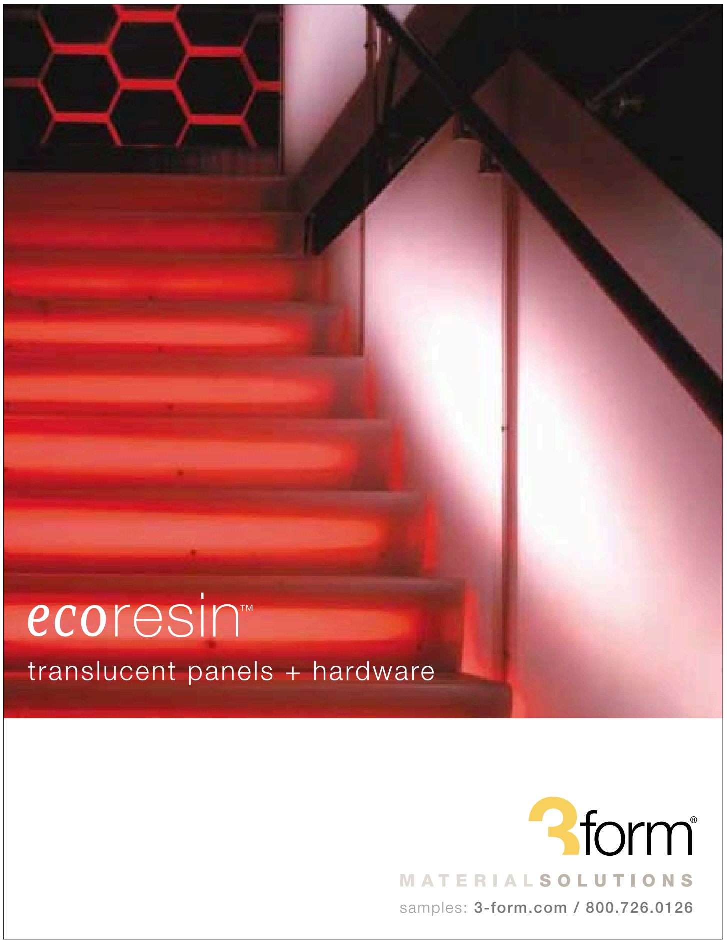
The buckling-resistant braces have other advantages, as well. They allow the structural frame to be built using less steel overall, but more important, their increased compressive strength simplifies the design of member connections and lowers the foundation's strength requirements, says Atila Zekioglu, a




Yielding steel core
Encasing mortar
Unbonding material between steel core and mortar
Steel tube
BUCKLING-RESISTANT-BRACE SCHEMATIC DESIGN

Buckling-resistant-brace frames (illustration, left) are visible in the lecture hall of the library (photo, far left). Because the steel core can slide within the mortar-filled tube, the braces can elongate when subjected to tension. They also have the strength to withstand repeated compression forces without buckling.

PHOTOGRAPHY: © MILROY & MCALEER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The triangular roof form of the life sciences building shelters an informal gathering space.

principal at Arup's Los Angeles office and the structural engineer on the SBVC project. Although the design team also considered using concrete shear walls for lateral stability, the weight and thickness necessitated by the fault's location made them infeasible both aesthetically and technically.

The buildings are strong enough to withstand earthquake forces twice the force of gravity in the lateral direction. To put that in perspective, the buildings would be structurally sound if they were turned on their sides and acted structurally as cantilevers, Zekioglu says.

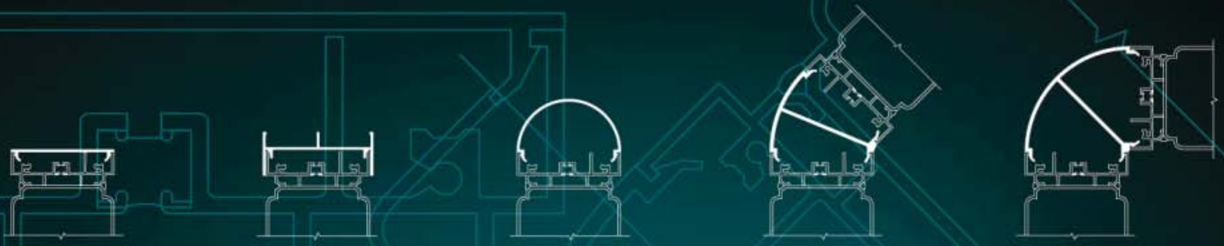
Planning for future growth

Arup's Los Angeles office has been consulting with SBVC on seismic and geotechnical issues for more than 10 years, and the architects tapped the firm's expertise not only for engineering the new buildings, but also for finessing tricky siting and planning issues.

As per state code, SBVC had to establish a no-build zone within 50 feet of the fault trace on each side; as a result, seven existing structures were razed. At a design charrette early in the project, Zekioglu explained to the design team that the strongest forces during an earthquake run either parallel or perpendicular to the San Jacinto fault line. He recommended that the master plan require new buildings to be aligned in these directions (rather than the existing campus grid) to reduce torsional forces on the buildings in the event of an earthquake. This decision also uses open land efficiently around the swath of the no-build zone, which is at least 150 feet wide in some areas of campus.

A changing field

The rebuilding effort at SBVC may serve as a template for the design of future buildings in seismically vulnerable regions. The three new structures are the first approved by California's Division of the State Architect (DSA) that use buckling-resistant braces, and perhaps more critically, the first to employ performance-based seismic design rather than relying on prescriptive building codes. The codes can be troublesome because they don't always accurately reflect what's going on at a particular site. "At SBVC's campus, the general seismic hazard code underestimates the severity of possible seismic activity at the campus by 100 percent," Zekioglu says. Arup's design experience with the new braces, which began several years ago when they used them in projects at U.C. Davis and U.C. Berkeley [RECORD, October 2002, page 185], helped convince state officials that they're a proven method. "Advocating any unique system requires intense investigation and collaboration," he says, "but DSA is breaking new ground here. We'd be happy to see other projects follow suit." *Deborah Snoonian, P.E.*



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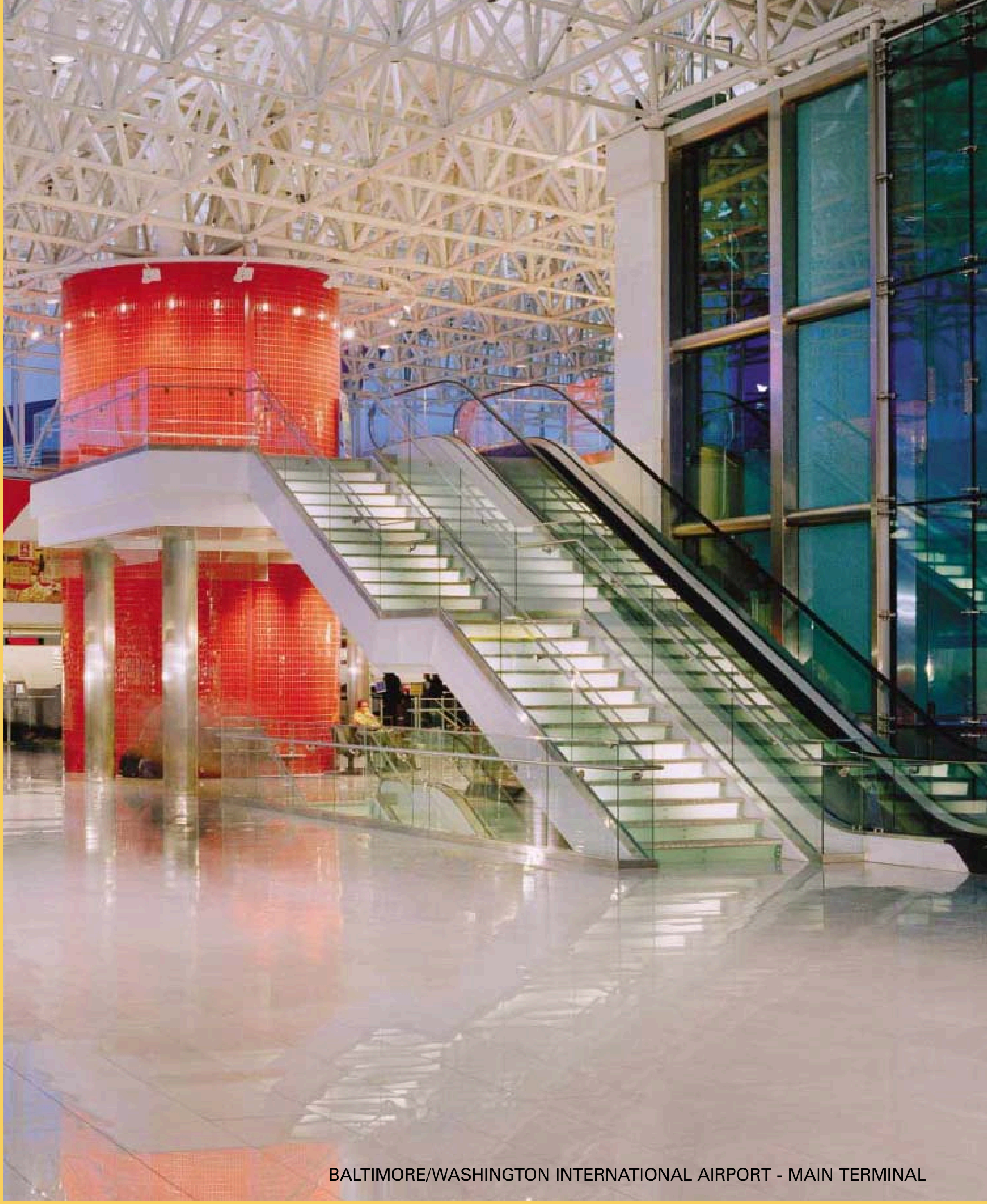
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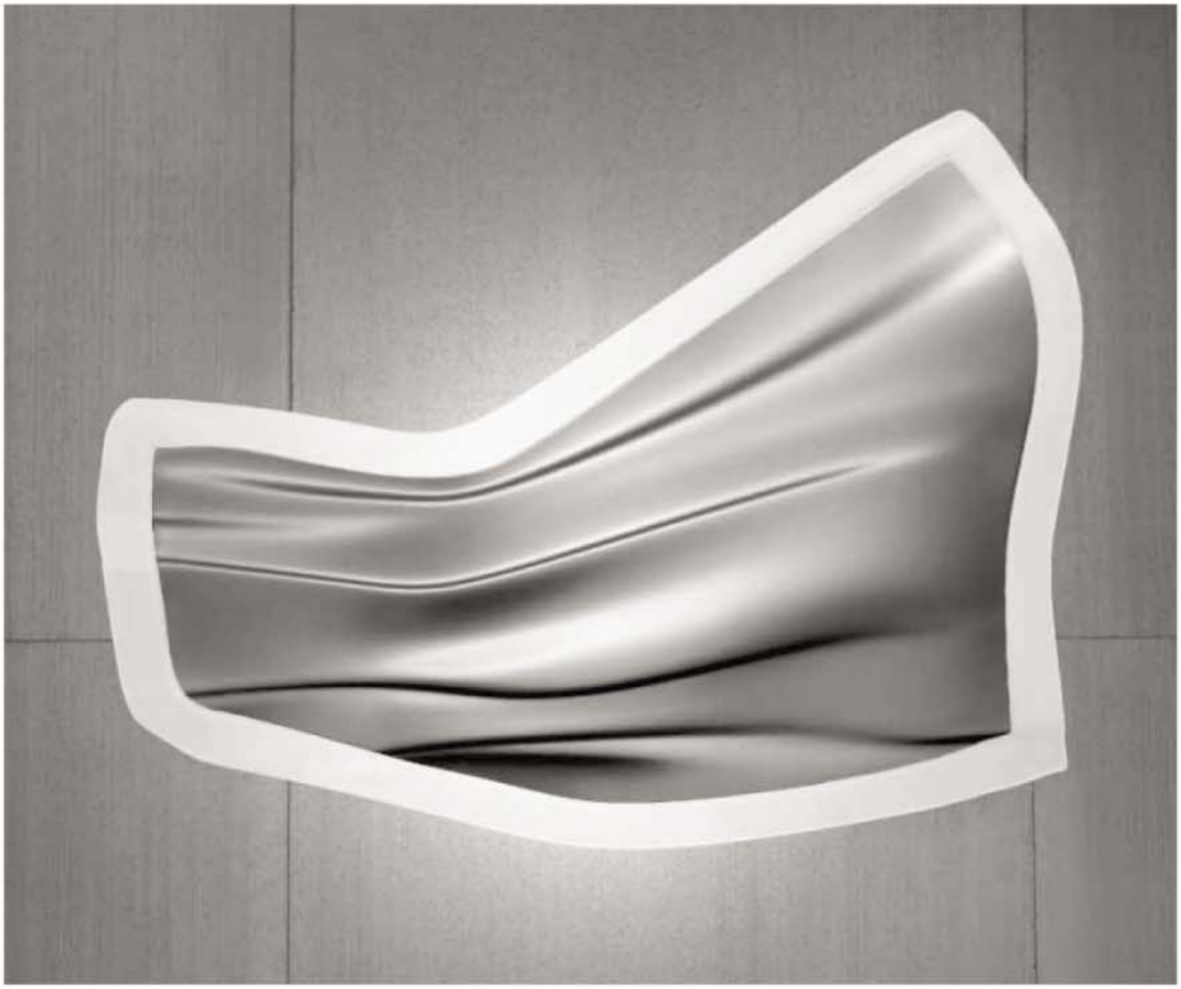

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BRIEFS

The luminaries of professional lighting design took their bows in June at the annual Lumen Awards gala in Manhattan. The New York section of the Illuminating Engineering Society presented **top honors to projects as far afield as Finland.** Citations went to Tillett Lighting Design for the Icepool installation at Lapland's seasonal Snow Show [RECORD, May 2004, page 194]; Fisher Marantz Stone for Postcards; the Staten Island September 11 Memorial; Johnson Schwinghammer Lighting Consultants for Truelightpod, a L'Oreal lab in Los Angeles; and Cline Bettridge Bernstein Lighting Design (CBBLD) collaborating with Technical Artistry on the William J. Clinton Library in Little Rock [RECORD, January 2005, page 110]. CBBLD also won honors in the Award of Merit category for the **lighting of the Pier 1 Imports Headquarters** in Fort Worth. Other Merit Award winners were Focus Lighting for Manhattan's flagship FAO Schwarz Store; and SBLD Studio for the illumination of the New York law firm Kirkpatrick and Lockhart. The top **Awards of Excellence were bestowed** on Focus Lighting for two projects: the Semiramis Hotel in Athens, Greece, and the Teatro restaurant at the MGM Grand hotel in Las Vegas. The final Excellence honor went to Cosentini Lighting Design for the Bank of America trading floor in Charlotte, North Carolina. **For photos of the winning projects** and more information on how to enter the 2006 competition, go to www.iesny.org. ***1000 Lights*** (Taschen, 2005) is the title of a new survey of international lighting design, from Edison's first incandescent bulbs to the LEDs of the present. The two-volume study is a companion to the popular ***1000 Chairs*** compendium previously presented by the same publisher. Edited by London-based writers and curators Charlotte and Peter Fiell, the lighting books present more than 1,200 lighting fixtures, from **Tiffany leaded-glass** table lamps to the outrageous designs of the 1960s, then on to the high-tech digital products that now are transforming the marketplace. For more information, check out www.taschen.com. **The International Association of Lighting Designers** hosts its Ninth Annual Educational Conference and Annual Meeting on October 20 through 22 in Washington, D.C. Back on the roster this year is Lighting Cross Talk, a roundtable discussion referred to by some industry wits as "speed dating for lighting designers." The 2-hour session will address topics of interest to both manufacturers and specifiers. Go to www.iald.org to register. *W.W.*

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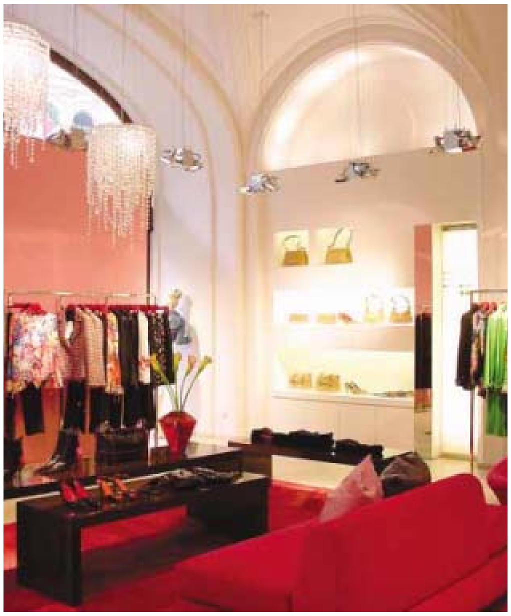
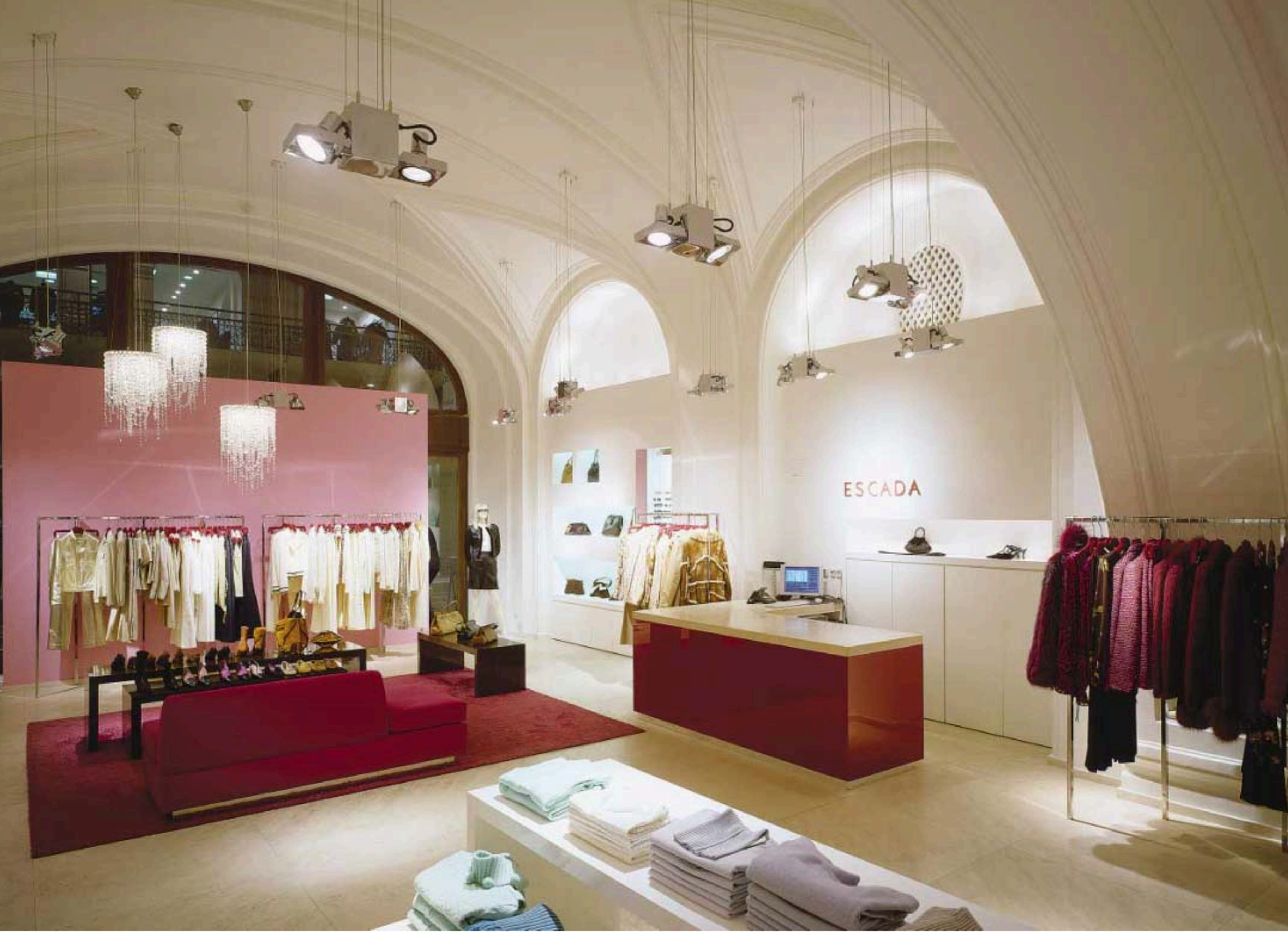
We feel particularly peripatetic this month. Darting across international datelines, we report on how designers around the world are tackling diverse lighting challenges. We venture to Moscow's Red Square, where the retailer Escada has enlivened the GUM department store with high-style apparel and interiors (below). The shop's luminaires, fabricated by Ansorg, juxtapose crystal chandeliers and streamlined metal downlights to brilliant effect.

In Frankfurt, the design firm 3deluxe has threaded the knockout nightspot Cocoon with color, light, and shimmering surfaces.

Then west of Palm Springs, we come upon the miragelike resort called Morongo. Its arsenal of sophisticated fixtures brighten the desert landscape. Finally, we brought back the best of Milan's Euroluce lighting exhibition. Enjoy our travelogue. *William Weathersby, Jr.*



PHOTOGRAPHY: COURTESY ESCADA



Reflected light off the white-plaster vaulted ceilings complements the rosy-hued accent walls and carpets, an ambient combination flattering to shoppers (above and right). Ansorg created made-to-measure custom pendants for Escada.

The Ansorg design team imbues Moscow's **Escada** shop with sparkling light, bringing flair to Red Square

By William Weathersby, Jr.

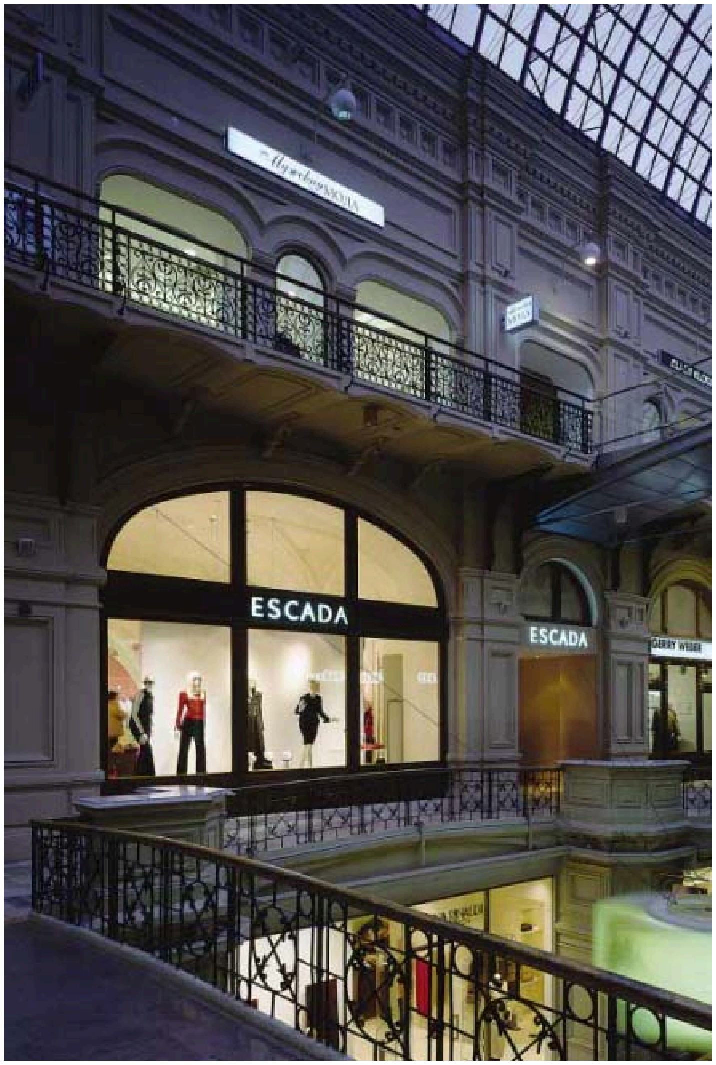
Red Square is a monument to Moscow's living history. Here sits the Kremlin, seat of the president and congress; the cathedral of St. Basil and its onion-shaped domes; and Lenin's mausoleum. Here too is the famous GUM department store, which started life in the 19th century as an ornate shopping arcade built to replace a market that had burned to the ground. Designed between 1890 and 1893 by Alexander Pomerantsev, the eclectic building commissioned by Czar Alexander III combines medieval Russian ecclesiastical architectural details laid over an elegant steel framework with a glass roof, which evokes the great turn-of-the-century train stations of London and Paris. Its facade, dominated by a mighty entrance arch and three towers, takes up most of the eastern edge of the square. In 1921, the complex became the official state Soviet department store GUM (Gosudarstvij Univaersalnil Magasin).

In contemporary Russia, GUM has blossomed into the main staging ground for selling luxury goods to the expanding middle and upper classes in the 9-million-strong metropolis. The complex, with approximately 266,000 square feet of retail space, accommodates boutiques for most top fashion designers and world-class brands. The department store's refined interiors feature glass-roofed walkways and domes, vaulted ceilings, ornate detailing in plaster and metalwork, and a central Art Nouveau fountain. GUM is renowned not only for its vast dimensions, but its fully glazed roofs covering the main arcades. These canopies allow natural light to reach down through the two upper levels to the ground floor. (Indeed, originally even the basement spaces received daylight via glass prisms formerly set into the ground-floor plane.)

GUM GRANTS THE RETAIL LANDSCAPE A RICH SENSE OF RED SQUARE HISTORY. LIGHTING HELPS TO LINK OLD AND NEW.

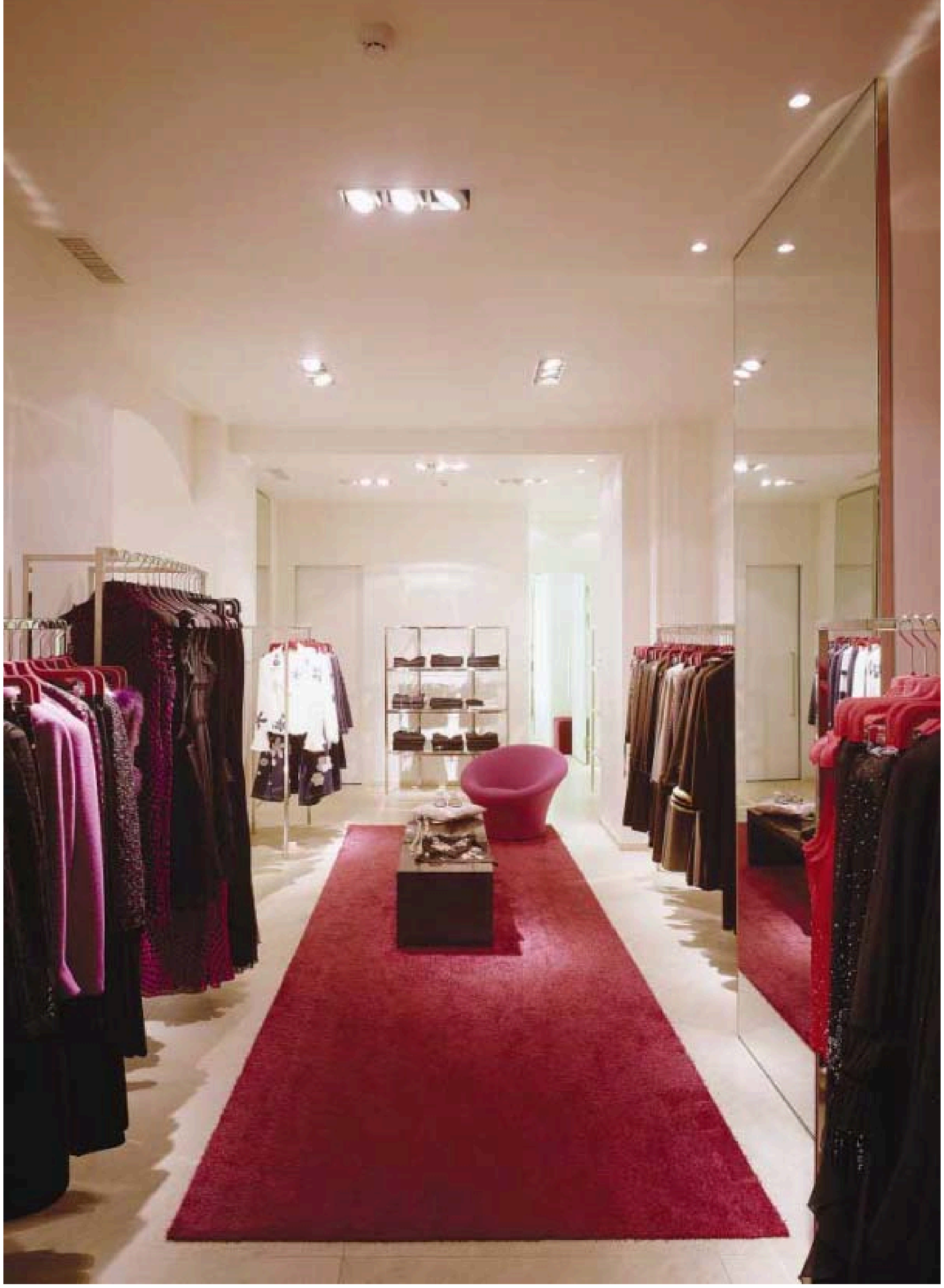
After negotiating a prominent location within the GUM complex, the 26-year-old German fashion house Escada opened its doors to the Moscow public with a tradition-meets-trendy interior landscape enhanced with elegant lighting orchestrated by the German turnkey-lighting-design and fixture-fabrication firm Ansorg. Already boasting 440 freestanding shops and department store boutiques in more than 60 countries, the luxury brand now presents its women's collection, shoes, bags, and accessories on the second floor of GUM, adjacent to one of the ornate steel bridges. Escada, named after an Irish thoroughbred by founders Magaretha and Wolfgang Ley, has brought racy flair to this fashion hotspot on Red Square.

At each of its store locations, the fashion brand's interior design concept follows a consistent theme, "the color of elegance." Working with 1,722 square feet at GUM to create a stand-alone boutique within the larger department store, Escada's team of in-house architects and store planners adapted the theme to this historic container. Restored, vaulted

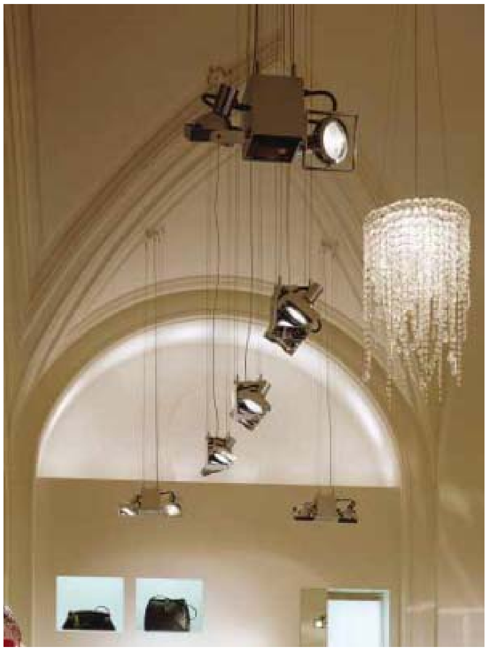


Escada kept light spilling through its facade to a minimum, since GUM's historic glass ceilings cast daylight throughout the shopping arcades.

PHOTOGRAPHY: © HANS-GEORG ESCH



Recessed metal-halide lamps illuminate display areas for apparel and accessories (left). The juxtaposition of cascading crystal chandeliers and the high-tech pendants honors GUM's changing history (below).



plaster ceilings arc above shelving and apparel racks constructed of polished steel. African black walnut clads niches and display tables. Velvet fabrics and a limestone floor contrast with carpets in bright pink and fuchsia. The palette of pink, brighter pink, and fuchsia extends to the furniture upholstery and accent walls, allowing a harmonious interplay between the warm tones of the decor and the fashion collections. The new interior fixtures, the apparel and accessories displays, and the architecturally listed building envelope all are showcased by the lighting. Low-voltage sources predominate to provide an ambient lighting scheme rich in contrasting shadow and illumination. Keeping to the corporate image guidelines laid out by Escada's design team, fittings from Ansorg's Cardo range feature a highly polished, custom-chrome finish. Made-to-measure "bespoke" versions of the luminaires feature suspended fittings that comply with the requirements of the city's landmark guidelines while providing brightness reflected by the high ceilings. Daylight from the arcade in front of the store also attractively grazes the entryway.

Each custom luminaire houses 90-watt, low-voltage QT12 lamps set within a 9-degree reflector. Window displays and shelving and racks along the perimeter of the Escada boutique can be precisely lit by tightly focused downlights, either wall-mounted or recessed flush with the ceiling plane. The recessed spots are fitted with 70-watt metal-halide CDM-T lamps within a 14-degree reflector.

Meanwhile, custom crystal chandeliers provide cascading, jewel-like contrasts to the modern, super-engineered pendants surrounding them. The juxtaposition of old and new honors the site's ever-changing history, from capitalism to communism and back. The lighting design's industrial polish makes an extraordinary match with the architectural dignity of GUM, sort of like a favorite Escada suit that still fits like a glove and will remain in vogue many fashion seasons hence. ■

Project: *Escada at GUM department store, Moscow*

Developer, interior designer: *Escada AG in-house team; Interior Concept; Blocher & Blocher*

Lighting designer: *Ansorg—Jeremy Delport-Barrett, export manager/ coordinator*

Sources

Custom lighting fixtures: *Ansorg*

For more information on this project, go to Lighting at **www.architecturalrecord.com**.

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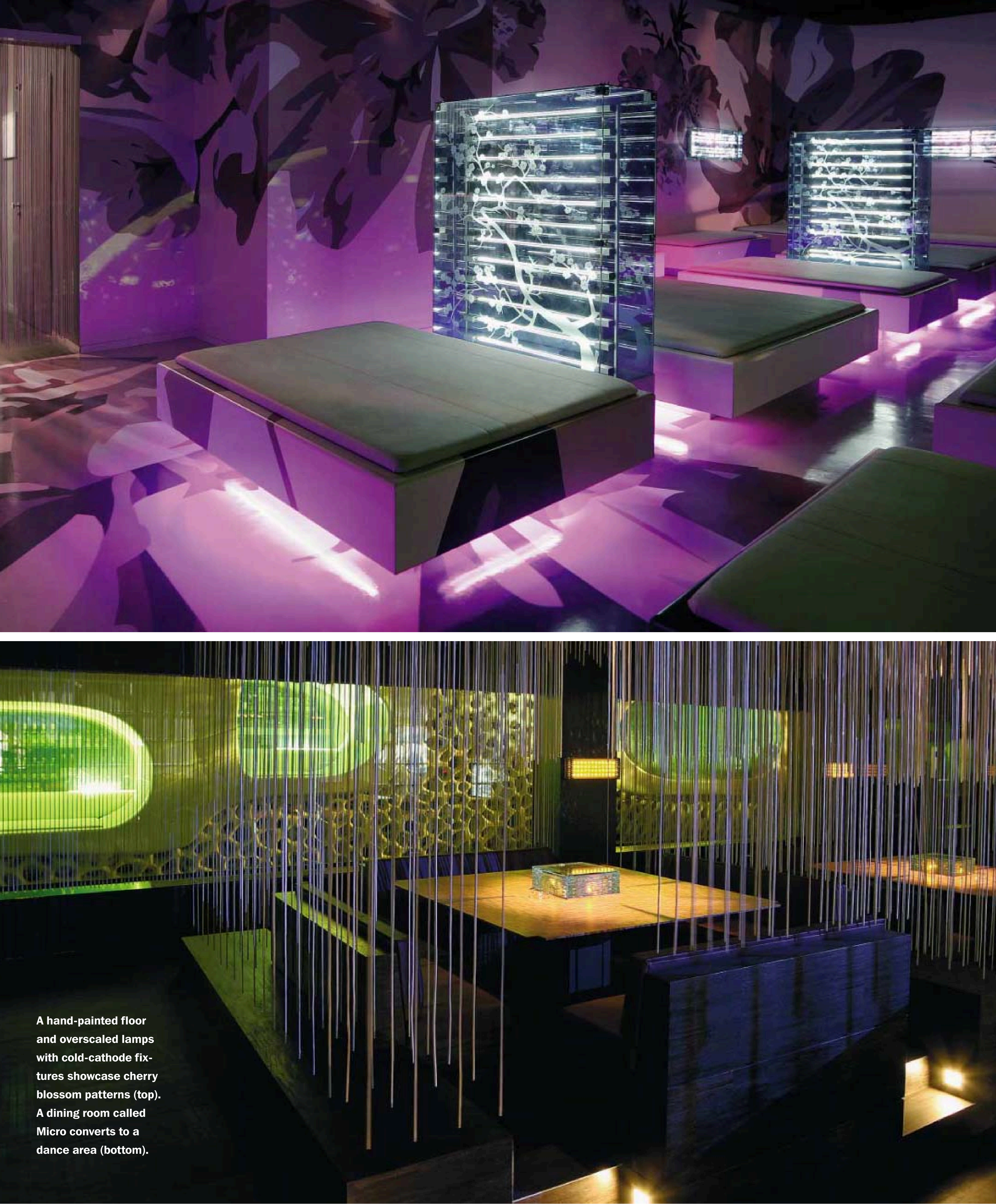


A hand-painted floor and overscaled lamps with cold-cathode fixtures showcase cherry blossom patterns (top). A dining room called Micro converts to a dance area (bottom).

Interlocking spaces threaded with light animate Frankfurt's **Cocoon Club**, designed by 3deluxe

By John Peter Radulski

Frankfurt, Germany's East End is undergoing a radical metamorphosis. Formerly home to industrial and manufacturing plants, the district has grown into a sought-after center for artists and designers who in turn support an expanding roster of restaurants, bars, and clubs. Among the new boîtes is the aptly named Cocoon Club, where transformation is the norm. Created by the Weisbaden-based interdisciplinary design firm 3deluxe, the 29,000-square-foot club combines dancing, dining, drinking, and networking within a light-filled interior that practically vibrates with multimedia and graphic elements.

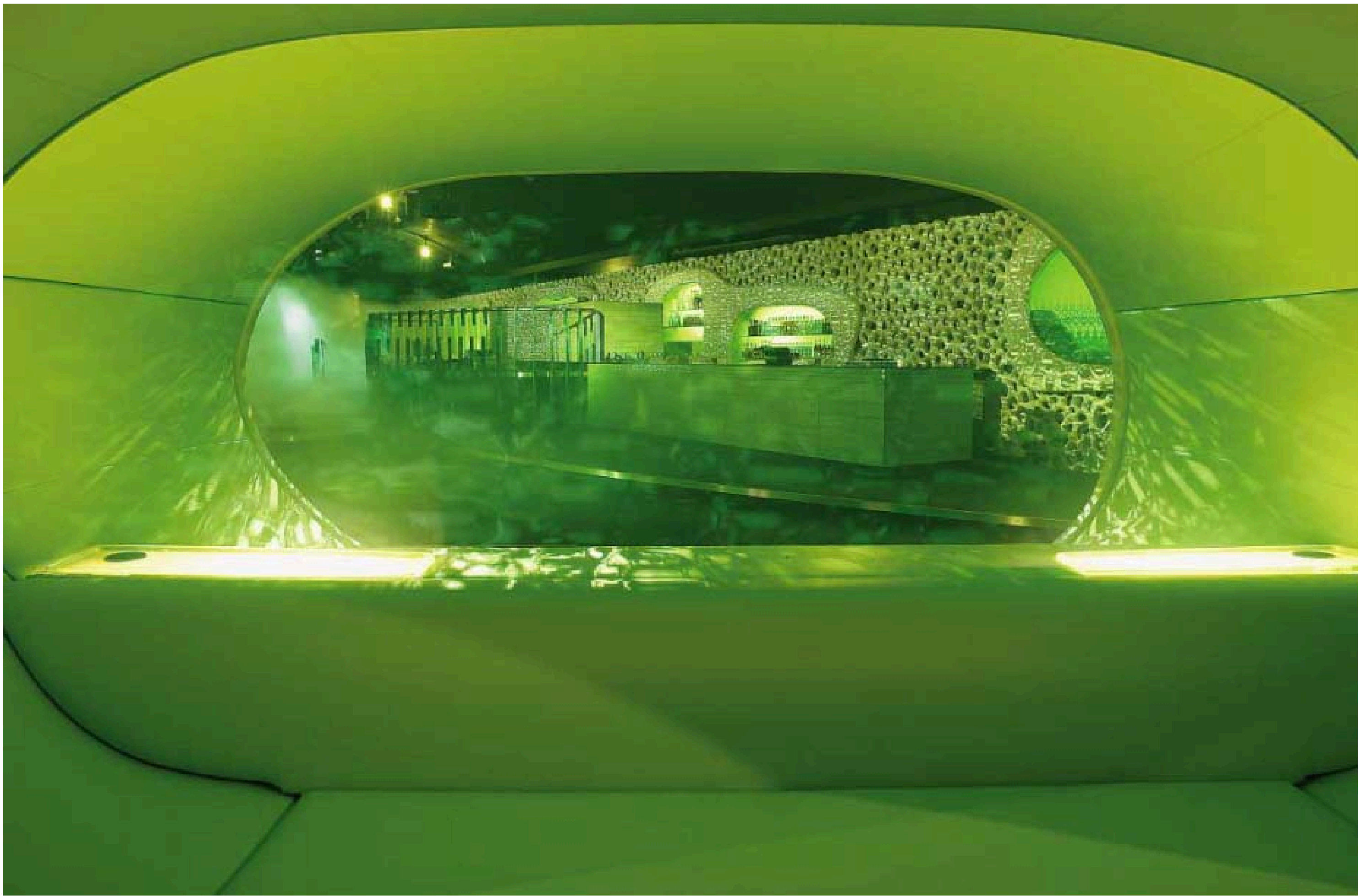
The complex sits on the street level of the five-story U.F.O. office building designed by local Deitz Joppien Architeckten. (No, it's not an alien abduction center: U.F.O. is an acronym for "*Unbekannter Frankfurter Osten*," or "Unknown Eastern Part of Frankfurt.") The triangular footprint of the complex, with its three points gently rounded, guided 3deluxe's interior architecture. The central dance zone is ringed by a series of circulation areas and lounges that feed into two restaurants and the restrooms, which are arranged along the building perimeter. Although specific areas have been allocated for discrete uses, the nightclub interiors rely on visual transparency and functional flexibility to create an immersive, sensory environment.

A 325-foot-long "membrane wall," fabricated of concrete panels that serve as projection screens, delineates the three sides of the 8,500-square-foot main Cocoon space. The club is equipped with 23 digital light projectors and an equal number of software systems that also control a LED matrix with a total of 1,152 individual light points. Additional illumination sources encompass automated

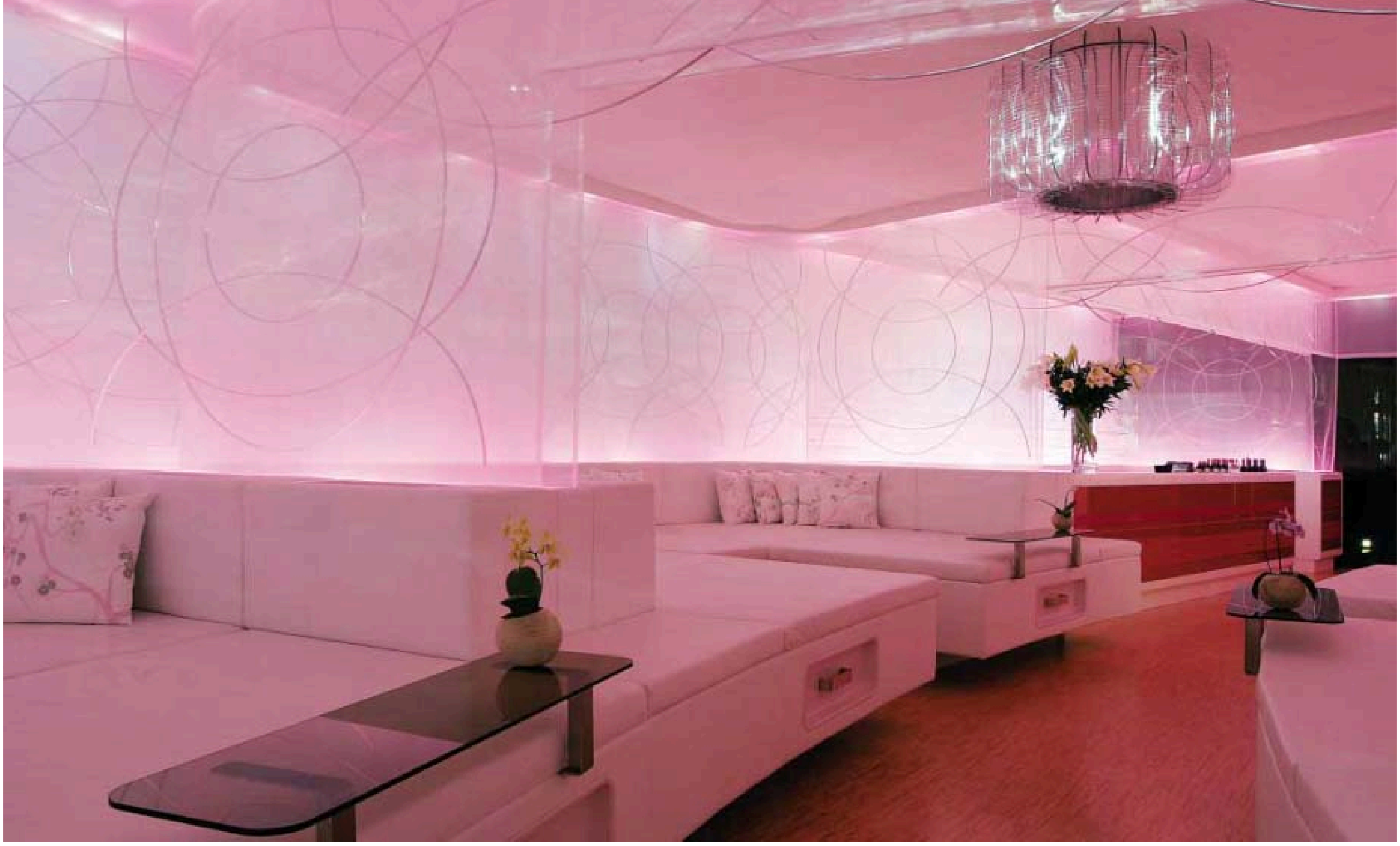
John Peter Radulski, the former editor in chief of Hospitality Design, *is a freelance writer based in Westport, Conn.*

Project: *Cocoon Club, Frankfurt*
Lighting and interior designer: *3deluxe—Dieter Brell, Andreas Lauhoff, Stephan Lauhoff, Nik Schweiger, principal designers*
Architect: *Deitz Joppien Architeckten*
Consultants: *Lightpower GmbH (show lighting); Karlen (specialty lighting); Meso (digital media systems); Screen.NT (hardware, video); medienprojekt p2 (media); Teamtec Media Technology (installation)*

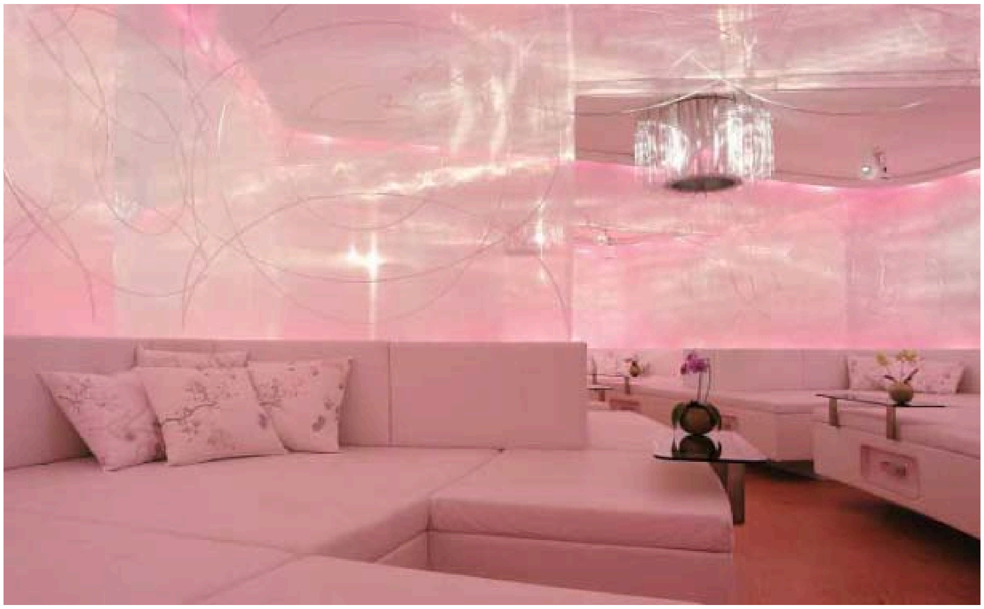
Thirteen seating pods set into a concrete wall separate the perimeter of the dance floor from the dining and lounge spaces (below).



PHOTOGRAPHY: © EMANUEL RAAB



Bed Restaurant Silk (above and right) offers the most subdued environment, with 170 neon lamps with pink-colored filters washing the walls and hung fabric.



theatrical/club luminaires, including spotlights and stroboscopes. A deejay and veejay can perch within a control booth fabricated of polystyrene panels and cantilevered over the dance floor. They get a full view of the floor and stand ready to change the music or 360-degree projections on the wall and other surfaces. Also within the club—whose aesthetic might remind some clubgoers of the captain's bridge aboard the Starship Enterprise—sits a 325-square-foot stage.

The membrane wall is inset at floor level with 13 oval pods—or cocoons—upholstered in vibrant green faux leather; here, guests can lounge between dances or view the action out on the floor. Five additional cocoons on the upper level of the wall serve as VIP skyboxes, while a separate VIP lounge accommodates 20 patrons.

The circulation path that rings the membrane wall provides access to the food and beverage venues. In Between—a lounge sandwiched between the wall and an expansive restroom—measures 6,500 square feet and showcases a cherry blossom design motif on its floors, walls, and lampshades. Cold-cathode tubes backlight glass-fronted display cases set into the wall, below the bar, and four freestanding light boxes.

The 3,400-square-foot Micro Club restaurant, off the club's entrance, offers modular seating and tables. While some patrons dine, others can enjoy cocktails. Later, the room transforms into another dance venue. Complementing the musical changes are multiple lighting effects. As the tempo and volume of the soundtrack ramps up, so does the intensity of the lighting. It's a visual and psychological progression intended to peak the energy level of the dining and drinking patrons to get them on the dance floor, according to club impresario Sven Våth. Micro's focal

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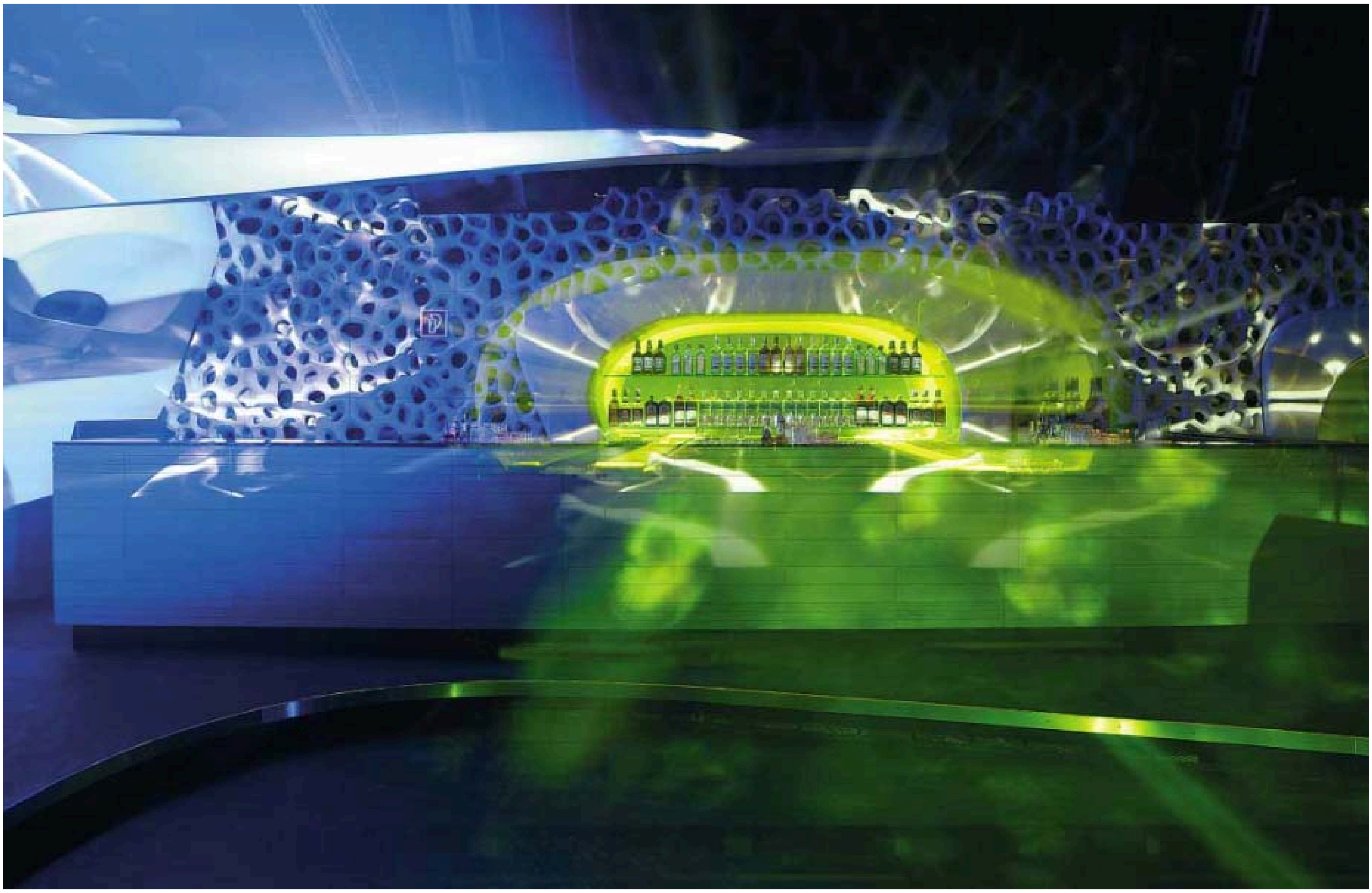

A bar adjacent to the deejay booth is backed by a membrane wall custom fabricated of cast concrete (top). Black terrazzo flooring combined with a mix of tile provides a crisp aesthetic that complements colored light while offering easy maintenance (below).

lighting feature is a fiber-optic matrix comprising hundreds of thin, fiberglass tubes illuminated by 13 digital light projectors, two of which are on motor-driven swivel mounts. Luminaires and dimmable downlights also shine, while laminated-glass tabletop items and a glass bar top and shelving are lit by amber LEDs. And, of course, a disco ball also descends and spins.

A more restful ambience engages diners in the adjacent Bed Restaurant Silk that accommodates up to 66 in eight bedlike seating areas covered in white leather. American birch floors complement a ceiling covered in white fiberglass-threaded fabric. Panels of semitransparent gauze serve as room dividers. Neon fixtures fitted with pink filters subtly backlight the walls. Four pendants composed of embossed polystyrene foil, Plexiglas ribs, and nylon thread hang throughout the restaurant, functioning as reflectors for washes of light.

The splashy club has set an elevated standard for nightlife in Frankfurt. And while the life of many European clubs becomes shorter as new venues always seem to arrive on the scene to steal their thunder, it will be interesting to see how this complex continues to evolve to keep the social butterflies returning to the Cocoon. ■

Sources

Automated luminaires: *Clay Paky*

Custom luminaires (design/ fabrication): *3deluxe*

Furniture: *Kessler*

Fabrics: *Eickelmann*

Acrylic glass: *Polymehr*

Aluminum ornaments: *Reborn*

Sound technology, controls: *JBL; Community; Crown; customization by Steve Dash*

For more information on this project, go to Lighting at **www.architecturalrecord.com**.

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California's **Morongo Casino Resort** becomes a bright desert oasis, with layered lighting by Visual Terrain

By William Weathersby, Jr.

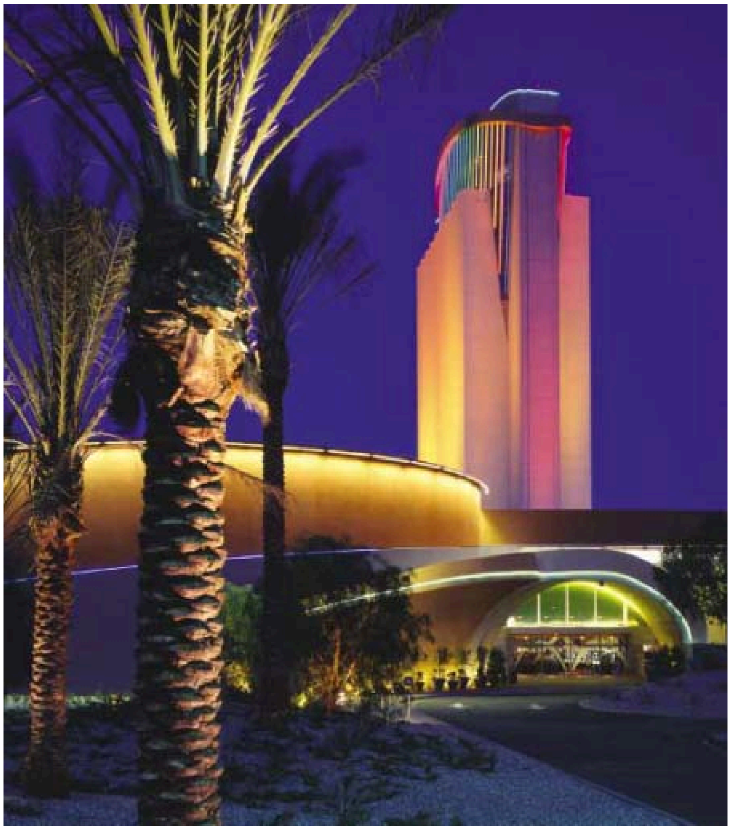
About 20 miles west of Palm Springs, the Morongo Casino Resort and Spa rises from the California desert like a rock formation stretching skyward. Inspired by the site's picturesque mountain ranges, sun-streaked vistas, and canyons carved by wind and water, the new $250 million resort pays tribute to the landscape through its architecture and illumination. Design architect Jerde Partnership International and executive architect Thalden Boyd Architects collaborated with the lighting design firm Visual Terrain on interior and exterior lighting that takes its cues from the surrounding topography and quality of light.

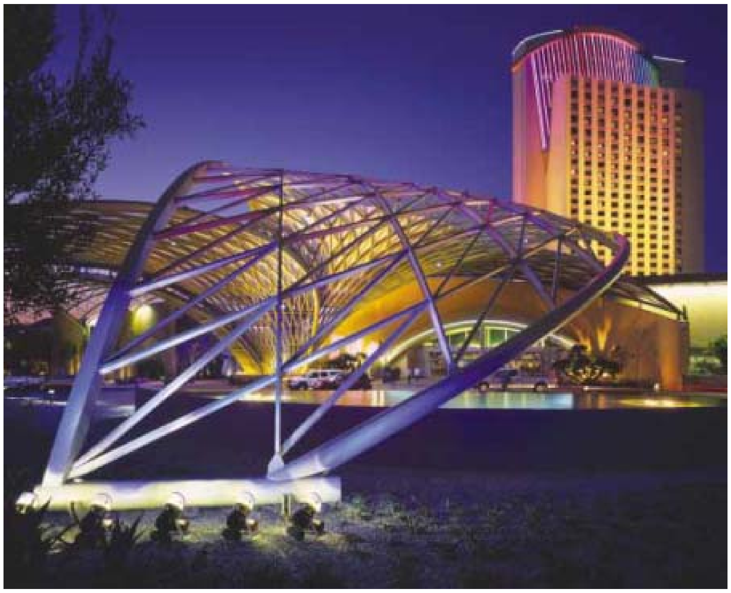
Commissioned by the Morongo Band of Mission Indians, the complex sprawls across 44 acres with a low-rise casino; a 310-room hotel tower; ancillary restaurants, nightclubs, and spa; plus a villagelike enclave of swimming pools and private cabanas. The dramatically illuminated 27-story tower can be seen on approach from as far as 5 miles away. "In terms of exterior illumination, the architects and clients wanted to animate the building," says Visual Terrain principal Dawn Hollingsworth. "The illumination color palette is restricted to colors found in the natural light of the desert during sunrise, midday, and sunset."

Senior project lighting designer Matt Levesque orchestrated an outdoor media and light show that guests may view from dusk until dawn. "The goal was to attract the attention of arriving hotel and casino patrons," he says, "with illuminated elements that tell guests they are about to embark on an entertainment adventure." The curtain wall at the top of the tower's entrance elevation employs projected video, graphic, and LED effects for a stylized collage depicting organic elements of nature. Automated luminaires wash the lower sections of the tower with colored light to extend a unified image. "We didn't want to design just another color-changing building," says Hollingsworth. "The colors blend into each other via the number of fixtures and their precise focus."

The exteriors also required special considerations addressing the nonurban night sky. "One of the design challenges was to decide whether to adhere to the dark-sky ordinances in nearby municipalities," says project designer Lisa Passamonte Green. (Exterior lighting levels were at the discretion of the design team, however, because the sovereign nation of Morongo itself does not have a dark-sky ordinance.) "We wanted to minimize how we approached the overall exterior and landscape illumination," she continues. "It's the first time our firm has ever downlit

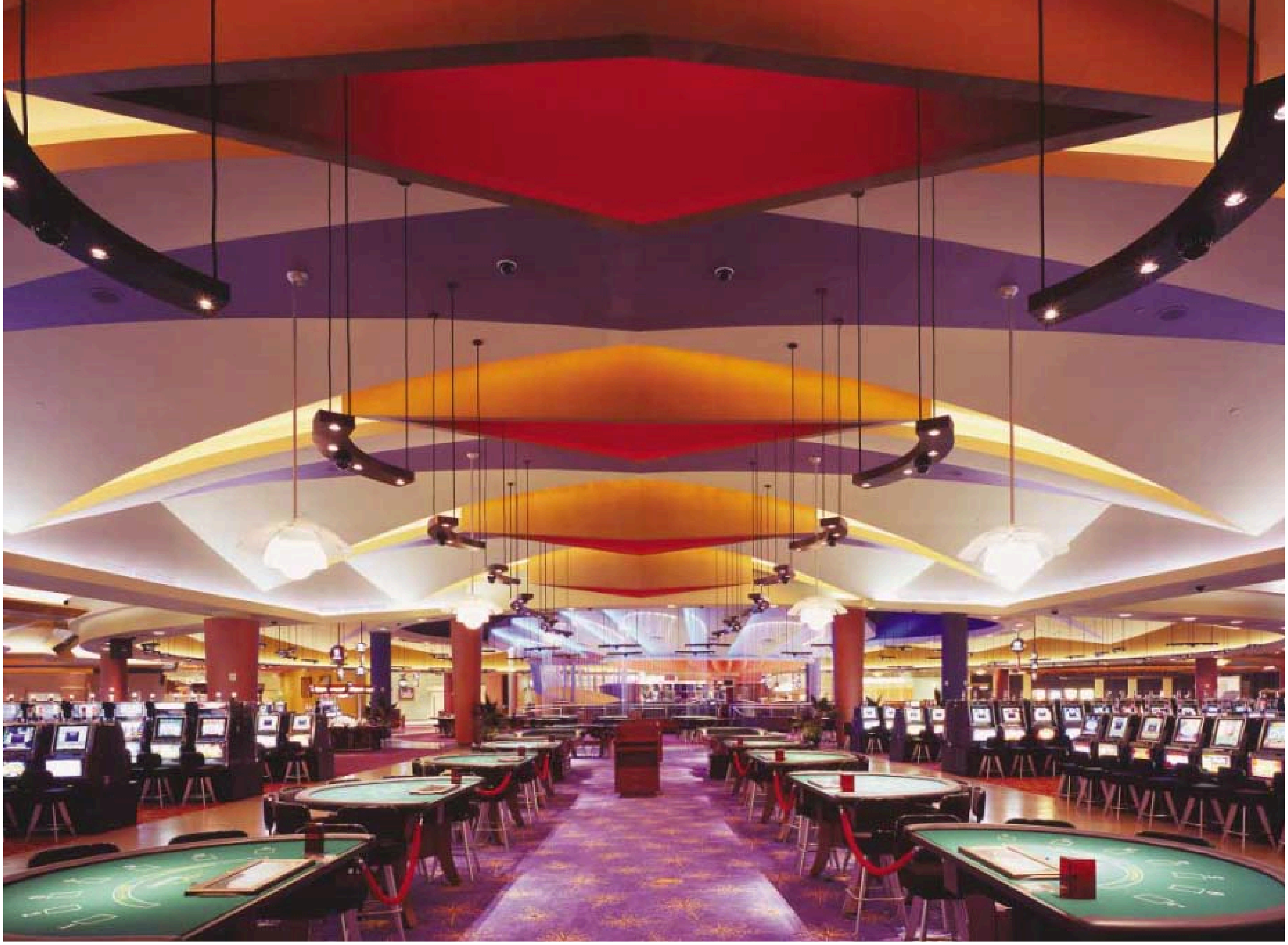
Project: *Morongo Casino Resort and Spa, Cabazon, California*
Lighting designer: *Visual Terrain—Dawn Hollingsworth, managing partner; Eileen Thomas, Matt Levesque, Jerry Windle, Lisa Passamonte Green, Stacey Westbrook, Francis Mempin, project team*
Architect: *The Jerde Partnership International (design); Thalden Boyd Architects (executive)*
Interior design consultant: *Hirsch Bedner Associates*
Electrical engineer: *RHR Consulting Engineers*
Electrical contractor: *Berg Electric*

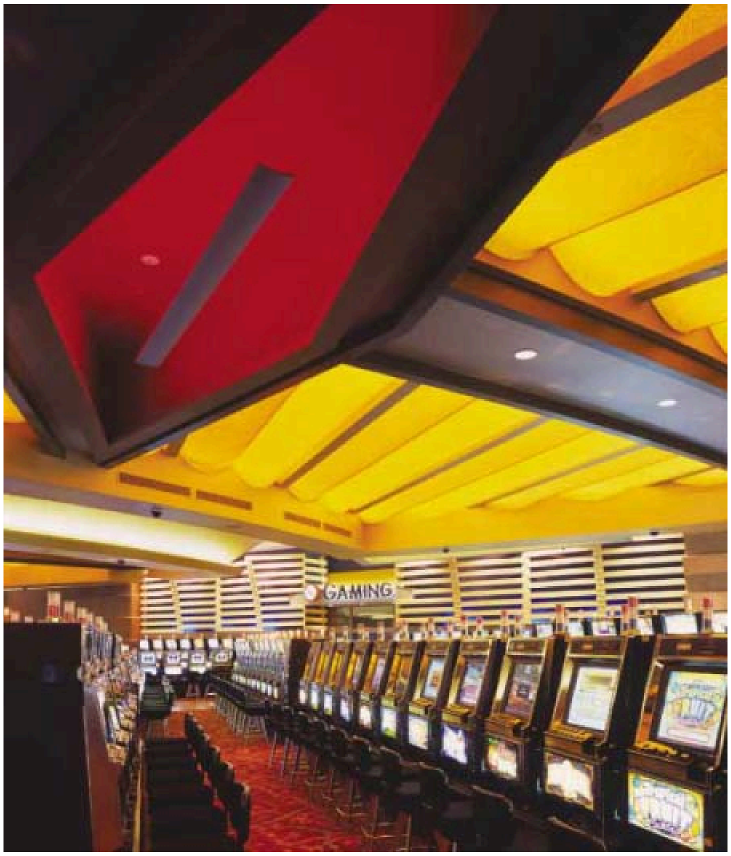




The nighttime view of the Morongo resort centers on the illuminated 27-story hotel tower (top and above). Rather than cast light upward into the desert skies, the designers mounted automated downlights at the top of the building (top and above). Cold-cathode and decorative fixtures add flash to the casino (opposite).

PHOTOGRAPHY: © TOM PAIVA





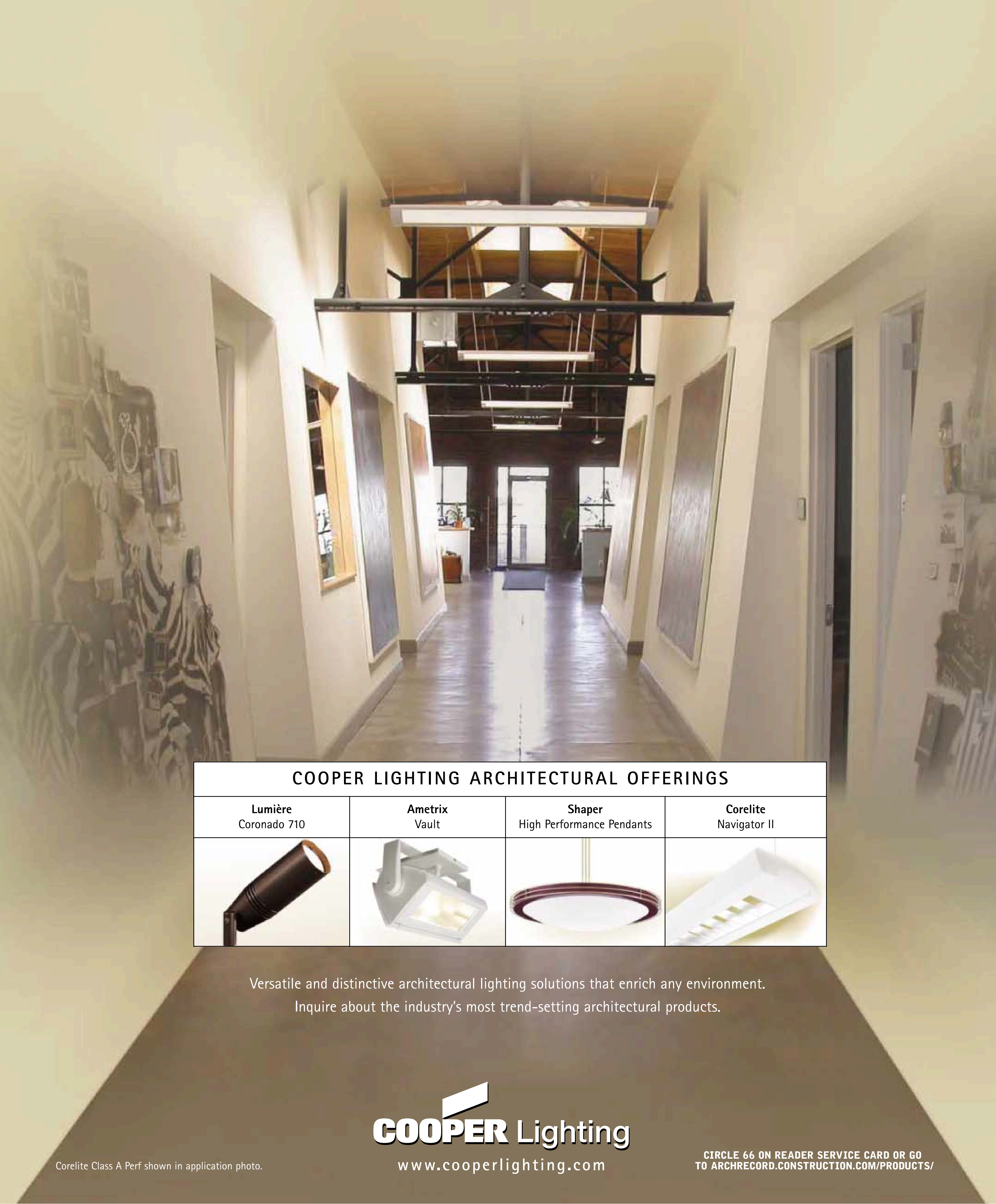
In the resort's main casino area, custom downlight pendants focus tightly over gaming tables (above); one fixture model spotlights blackjack stations while a companion unit covers craps tables. Faceted ceilings employ integral lighting, including LEDs, keyed to the colorful panels (left).

an entire facade (on the lower portion of the building) with the fixtures being mounted on top of the structure and focused downward."

The success of the lighting hinged in part on a computer animatic, or animated rendering, of the Morongo project that the architects produced for the client at the outset. "That was very helpful in getting a real sense of the vision of the project, the creativity that the architects were bringing to the table," says Hollingsworth.

The shape of the porte cochere, for example, is an abstraction of a giant desert bloom: The arc of each petal-like component measures more than 30 feet tall, with a center pistil that rises another 30 feet. The approach road and routes around the porte cochere are lit by 40-inch-tall bollards, strategically placed so as not obscure views of the structure.

The casino interiors, designed by Jerde with Hirsch Bedner Associates, evoke the Southwest with stone, glass, and wood surfaces without directly referencing Native American culture. The ceiling's design—with multiple planes, angles, and transition points—drove the floor and lighting plans. "The canopy is really four or five difficult ceilings that transition into each other," Hollingsworth says. To complicate issues further, each of the ceilings was clad with varied materials and finishes.



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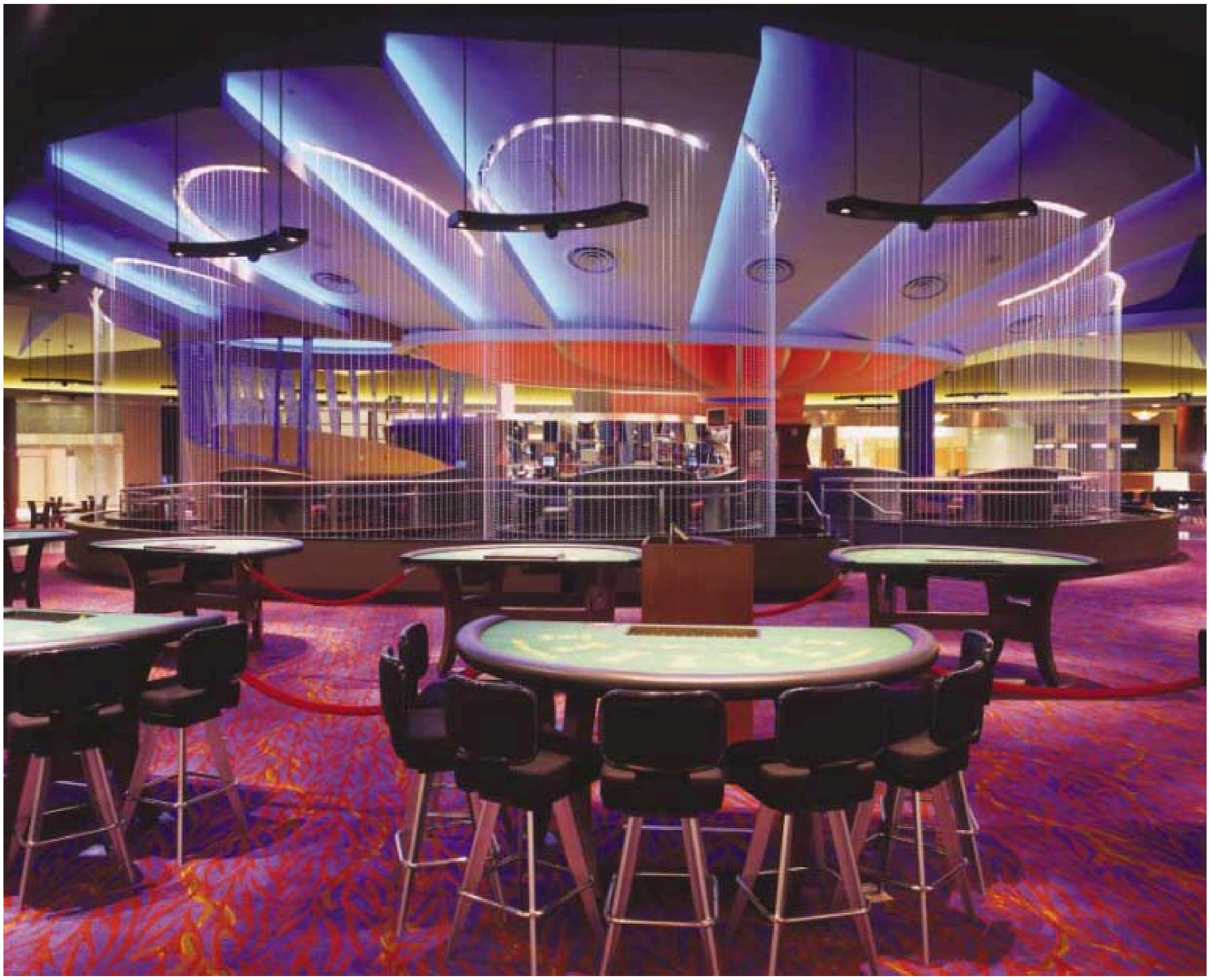
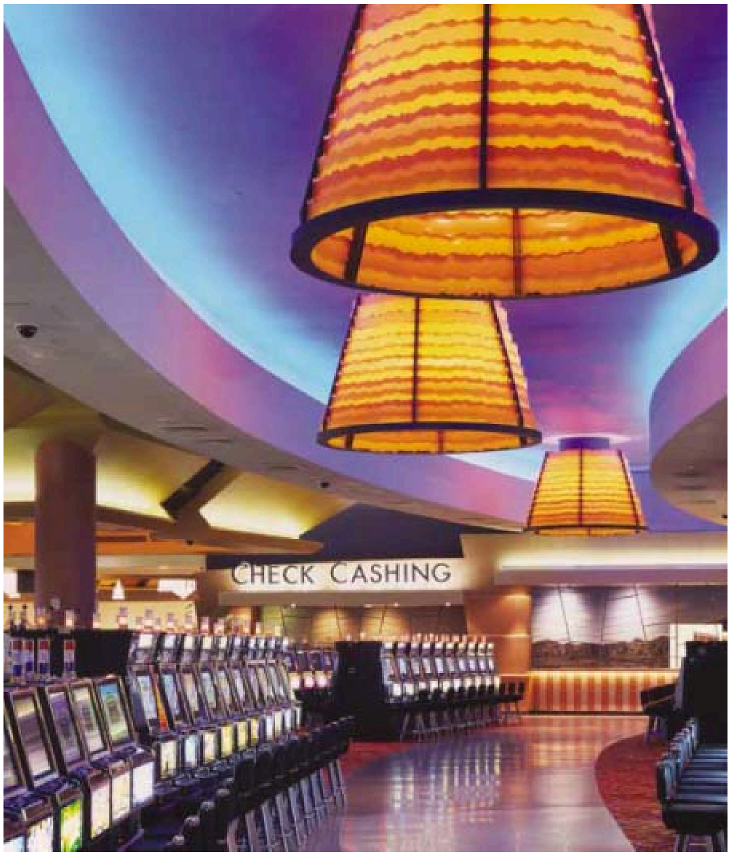
A cascading bead-within-water wall surrounds a casino bar (right). Layered lighting from fluorescent strips, LEDs, and decorative fixtures orchestrates a heightened visual terrain. Striped-shaded pendants lead patrons toward the slot machines (below).





"It was hard to understand the ceiling plans in a 2-dimensional drawing, or even in an elevation," recalls interior lighting designer Eileen Thomas. "The Jerde Partnership eventually built small-scale models of the different types of ceilings, so we could comprehend the configuration, then figure out how to light the ceiling plane."

Lighting the gaming tables, curved custom downlight pendants spread like boomerangs across the open space. In other gaming areas, pendants with striped shades cast an amber glow against a ceiling backdrop invigorated by blue and mauve light from cold cathode.

The breakneck buildout schedule, not atypical for the new generation of tribal casinos (California alone has 50), was daunting for the lighting design team; from initial design meeting to opening spanned only 23 months. "We broke ground before the drawings were finished," Hollingsworth recalls. The drawings got finished after the ground breaking, and even then there were still things we had to coordinate and change as budget issues came up." Lighting, she notes ruefully, often becomes a value-engineered wild card. When all the Morongo cards were on the table, however, the team achieved a full house of energy and light. ■

Sources

Interior ambient lighting: *Birchwood; Focal Point; Kirlin; Halo; Architectural Cathode*

Interior decorative lighting: *Visa; Lumid*

Downlights: *Spectrum; Portfolio; Contrast; RSA*

Task lighting: *Translite-Sonoma*

Exterior lighting: *Hydrel; Hevilite; Martin; Northstar/Thorn; Elliptipar; Gardco; Metalux; Selux; iLight*

For more information on this project, go to Lighting at **www.architecturalrecord.com**.

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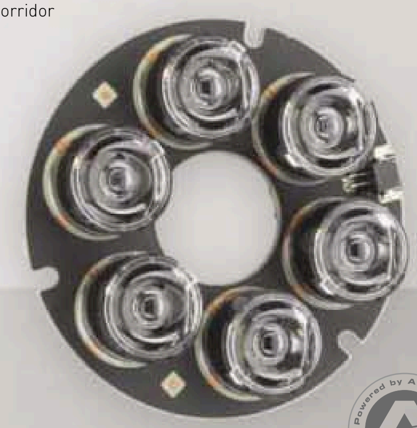

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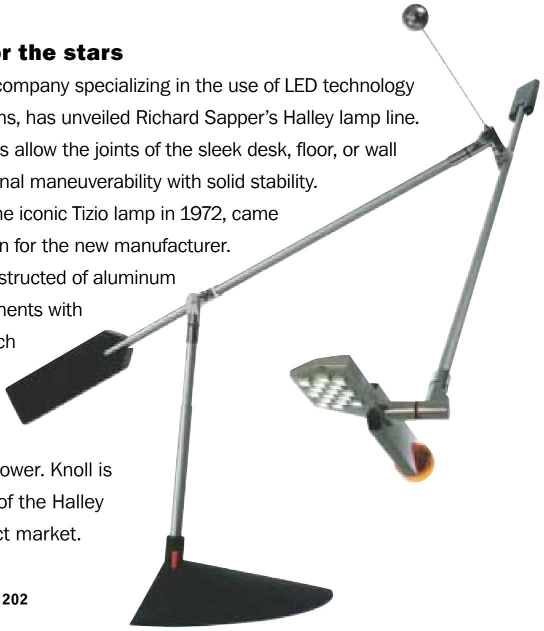
Lighting Products Euroluce

Jazzy lamps shone brightly at the Euroluce show accompanying the Milan Furniture Fair in April. Highlights reviewed here include a lamp by Norman Foster that mimics his architecture. *William Weathersby, Jr.*

▲ Murano light magic

The venerable Venini Studio, renowned for its luxurious Murano glass vases, sculpture, and interior fittings, has expanded its line of lighting fixtures with dramatic new designs. Selena (above left), designed by Emmanuel Babled, is a satin-finish-nickel table lamp that comes in three color combinations: crystal/white/coral/gray; crystal/white/sulphur yellow/straw yellow; and crystal/white/ivory/orange. The dimmable fixture uses a 60-watt G9 lamp. Circo di Lune (above right) is a table lamp composed of hand-blown-glass spheres in different colors surrounding a luminous sphere within a satin-finish-nickel basket. Designed by Monica Guggisberg and Philip Baldwin, the lamp comes with spheres in the color combinations white/black/gray or white/red/amber. Venini, Venice, Italy. www.venini.com **CIRCLE 200**

► Halley shoots for the stars

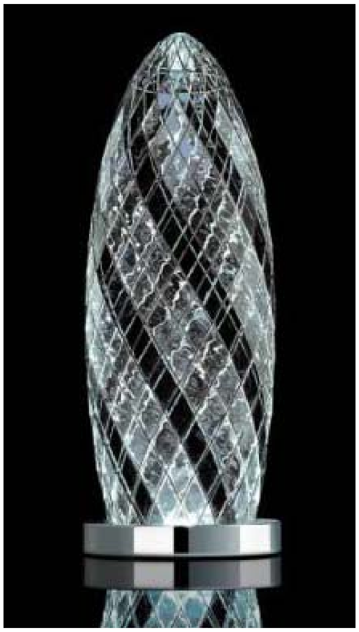


Lucesco Lighting, a new company specializing in the use of LED technology for general lighting systems, has unveiled Richard Sapper's Halley lamp line. The high-precision designs allow the joints of the sleek desk, floor, or wall lamps full three-dimensional maneuverability with solid stability. Sapper, the designer of the iconic Tizio lamp in 1972, came out of retirement to design for the new manufacturer. The Halley lamps are constructed of aluminum and steel primary components with some plastic molding. Each lamp's 16 LEDs produce light equivalent to a 35-watt halogen while only consuming 18 watts of power. Knoll is the exclusive distributor of the Halley Collection for the contract market. Lucesco, Palo Alto, Calif. www.lucesco.com **CIRCLE 202**

▲ Mirror, mirror

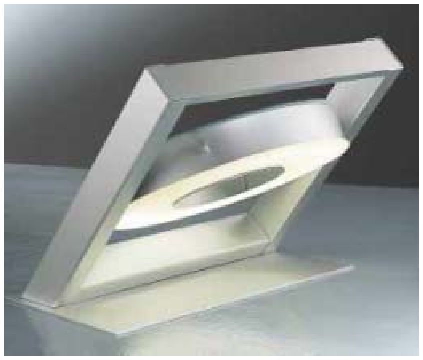
German lighting innovator Ingo Maurer has introduced Trotzdem, a line of tables with integral task lights, accompanied by coordinating mirrors and accessories. Constructed of Corian, the desk is approximately 13' long x 4½' wide. It is fitted with an adjustable task lamp, vases, pens, and a computer connection. *Trotzdem* is German for "in spite," and Maurer says he put the table into production although it was originally intended as a custom object for a client who canceled the commission. Ingo Maurer, New York City. www.ingo-maurer.com **CIRCLE 203**

► Glowing Gherkin



As an homage to his own London tower at 30 St. Mary Axe, commonly referred to as the "Gherkin Building" because of its picklelike shape, Norman Foster has designed a table lamp blown by Kundalini's Murano master craftsmen. The production method is the specialized technique of mouth-blown triplex glass. The lamp is handcrafted using thin, metal-coated water glass assembled with a complex Tiffany-like technique. In addition to the standard Gherkin models, a limited, numbered edition signed by Foster will be distributed through design and art galleries. Also shown at the fair were new lamps by Karim Rashid. Kundalini, Venice, Italy. www.kundalini.it **CIRCLE 201**

► Compact beam

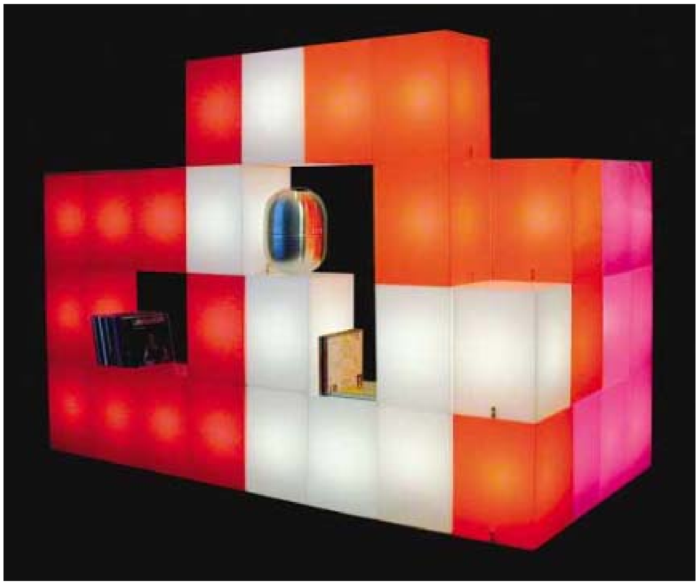


The Appollonia line of lamps from Movelight includes single- and double-suspension table, wall, and ceiling lamps, plus a floor lamp. The frame is extruded, anodized aluminum, and the lenses are white satin finish and mirrored glass. The center element can be rotated 360 degrees, with one side featuring clear glass and the other side mirror. Energy-saving bulbs are included with the fixture. Also on display at Euroluce was the Belladonna collection of handblown-glass table lamps and pendants available in a range of colors. Movelight, Quarto d'Altino, Italy. www.movelight.it **CIRCLE 204**

Lighting Products Euroluce

▼ Bright building blocks

French architects Laurence Bourgeois and Elisabeth Hertzfeld are the duo behind Remake Design. They have introduced the Remake Light, a 9" x 6" illuminated cube. “It’s a simple object, a light that can be multiplied without additional wires,” Bourgeois says. Available in orange, pink, red, white, gray, and black, the translucent, modular lighting units can create illuminated structures that double as furniture, partitions, or shelving. The low-voltage lighting elements are 10-watt, 24-volt xenon lamps, whose illumination level is equivalent to the foot candles cast by a 40-watt incandescent lamp. One plug-in cord can power from 8 to 24 modules. Remake Design, Paris. www.remake-design.com **CIRCLE 205**



◄ Up to the task

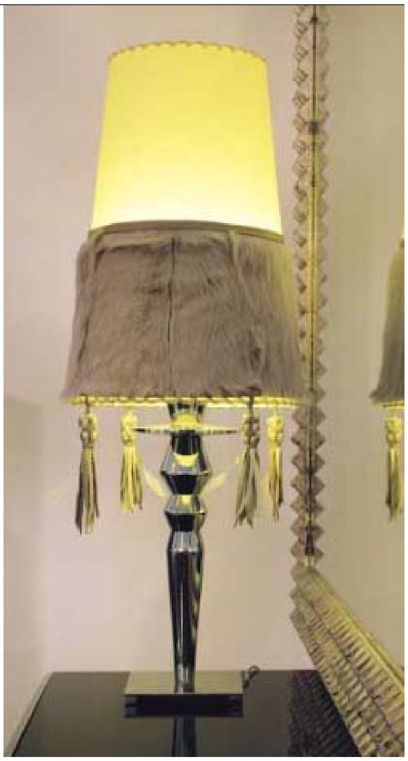
Jean-Marc da Costa’s Slice lamp cuts a fine profile as an elegant task lamp. Easy to install (plug-and-play) and delivering power and network integration capabilities, its controls can be linked to ambient light levels via a presence detector, or combined with centrally controlled light-management systems. The U-shaped base can be attached to a desk leg, and the lamp swivels 180 degrees, providing lighting to every corner of a desk. At maximum power, which can illuminate two workstations, the fixture uses about 170 watts. Serien Lighting, Rodgau, Germany. www.serienlighting.com **CIRCLE 207**

► No-frills foot candles

The Gìo collection of luminaires introduced by the Italian manufacturer Macrolux includes a wall-mounted version (right) or a floor-lamp model providing direct and indirect illumination. The Minimalist fixtures can accommodate either a 40-watt halogen, 7-watt compact fluorescent, or 20-watt metal-halide lamp. Philips Mini-Mastercolor electronic ballasts and bulbs are included with the luminaire. A variety of metal and matte exterior finishes are available. Also unveiled at Euroluce was Gloss, a recessed, adjustable downlight housing an AR111 lamp, and Book, an ambient lighting fixture shaped like a book, which can be wall-mounted either vertically or horizontally. Macrolux, Zoppè di San Vendemiano, Italy. www.macrolux.net **CIRCLE 208**

▶ Lighting filaments flaunt filigree

Complementing a range of upholstered furniture, bedding, and wood tables and chairs, decorative light fixtures from IPE Cavalli display a flourish of filigree and ornamentation. The Visionnaire Collection, conceived and coordinated by Samuele Mazza (manager of the Visionnaire shop in Milan) and architect Alessandro La Spada, blends neo-Gothic designs with contemporary function. The lighting line, which includes ceiling-mounted pendants, table lamps, and floor lamps, is produced by Italamp for the Visionnaire Collection. IPE Cavalli, Zola Predosa, Italy. www.ipe.it **CIRCLE 206**



▲ Sculptural landscape

Designed by Tim Derhaag, the 45 Collection encompasses floor, wall, or ceiling luminaires for indoor/outdoor use. The extruded aluminum alloy body features rustproof protection. Fixtures are available in satin-finish, anodized aluminum, matte black powdercoat, or teak surfacing. The luminaires are available in the following approximate dimensions: 8" long x 8" high; 8" long x 17" high; 8" long x 39" high; 17" long x 8" high; and 17" long x 17" high. The lamping for each model is either one 20-watt PG J5 or a 24-watt 2G11 bulb. Also showcased in Milan were new lighting fixtures by Antonio Citterio. Flos, Huntington Station, N.Y. www.flos.com **CIRCLE 209**

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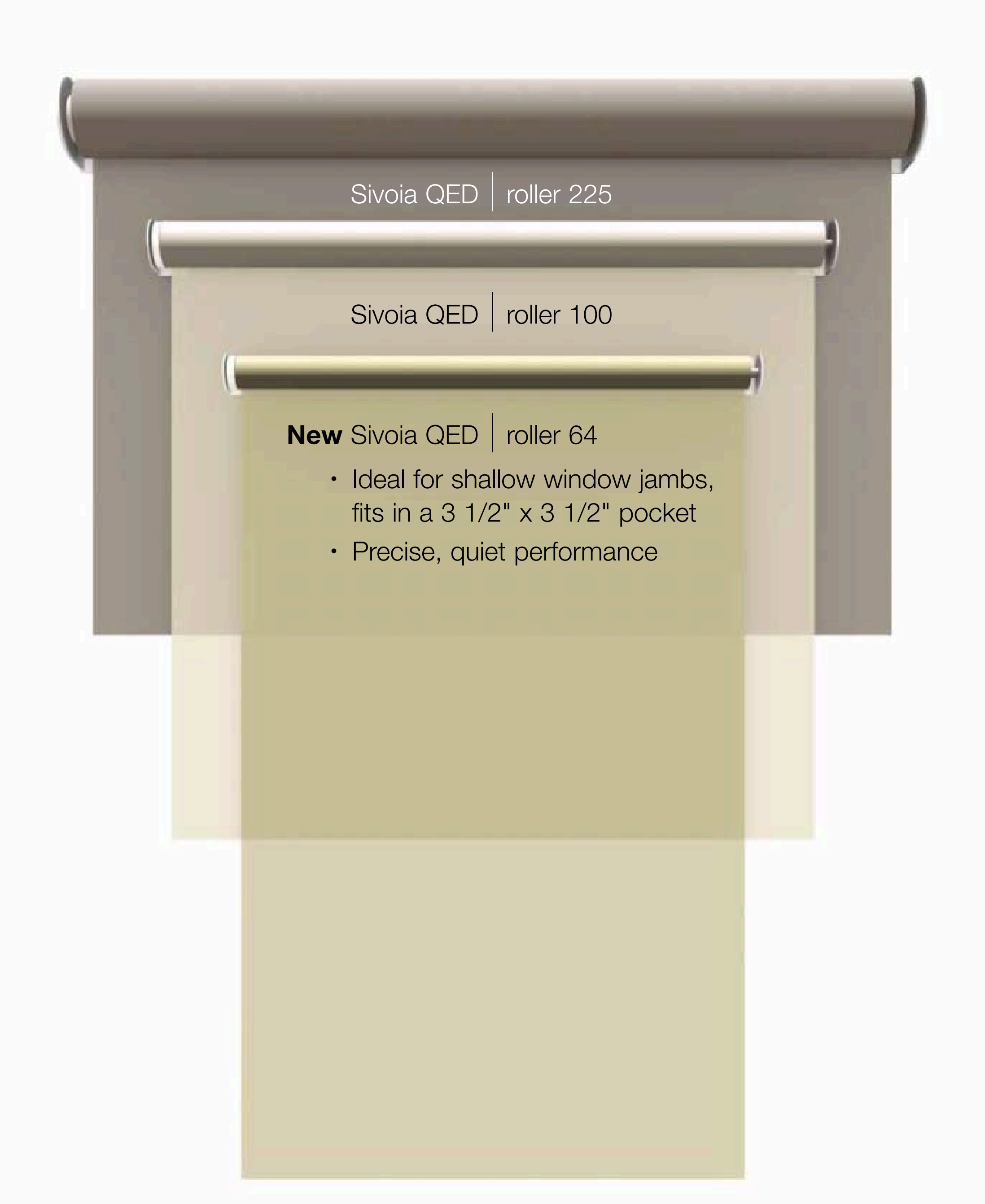
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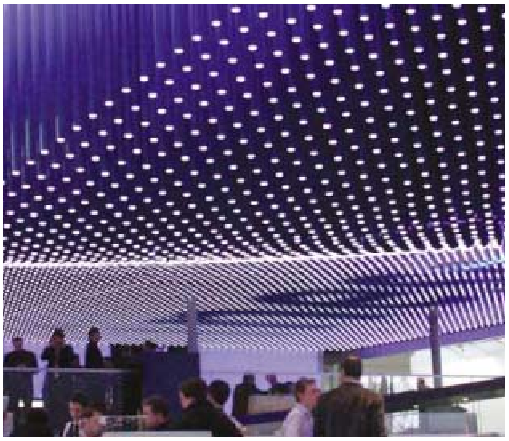
Lighting Products

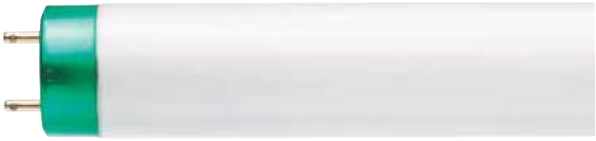
► Cool desktop task light

Waldmann Lighting took home a “Best of Category” award for interior luminaires for the Diva LED task light at Lightfair 2005, held last April in New York City. Designed by Porsche, Diva LED features cool-to-the-touch white LEDs that are ideal for office desktop areas, as they produce virtually no heat. The lamp’s adjustable head features a ribbed design made from extruded aluminum with an anodized finish. Spring-balanced adjustable arms (which also feature an extruded aluminum/anodized finish) meet the requirements of a variety of work-area configurations and desktop sizes. Waldmann Lighting, Wheeling, Ill. www.waldmannlighting.com **CIRCLE 210**



◄ Floating on a media cloud

At the CeBIT 2005 trade show in Hannover, the booth for mobile telephone provider O2 Germany featured Element Labs’ new Versa PIXEL system. The display consisted of Versa Pixels placed at the end of plastic tubes suspended from the ceiling. The varying tube lengths and spacing created distinct colored pixels that merged into waves of images, giving visitors the impression of moving beneath a 3D “media cloud” with images and text floating across it. The new Versa PIXEL line gives designers freedom over pixel shape and placement—including intricate 3D arrangements. Element Labs, Austin, Tex. www.elementlabs.com **CIRCLE 211**



► Lowest consuming T8

Philips recently introduced the 25-watt Alto Energy Advantage T8 system, the lowest energy-consuming 4-foot T8 system on the market. It operates on instant-start or programmed-start ballasts that supply a starting voltage equal to or greater than 550. The lamp reduces energy consumption by over 45 percent in applications using T12 lamps and magnetic ballasts, and by 20 to 30 percent for applications using conventional T8 lamps and electronic ballasts. Philips Lighting, Somerset, N.J. www.philips.com **CIRCLE 212**

► Tunable lighting

Ralph Reddig Design presented its newest lighting designs during the 2005 ICFF held in New York. Designed as an interactive piece, the Horizontal Slider encourages the user to play with the quality and composition of light. Horizontally adjustable, the lamp’s simple components—frame, bulb carrier, and cord—act upon diverse surfaces to create a tunable range of light intensity and feel. The Slider mounts to the wall using integrated hardware, and features a cast-acrylic diffuser lens; an aluminum frame, backer, and carrier; and a frosted-acrylic diffuser end panel. Ralph Reddig Design, Holland, Mich. www.reddigdesign.com **CIRCLE 213**

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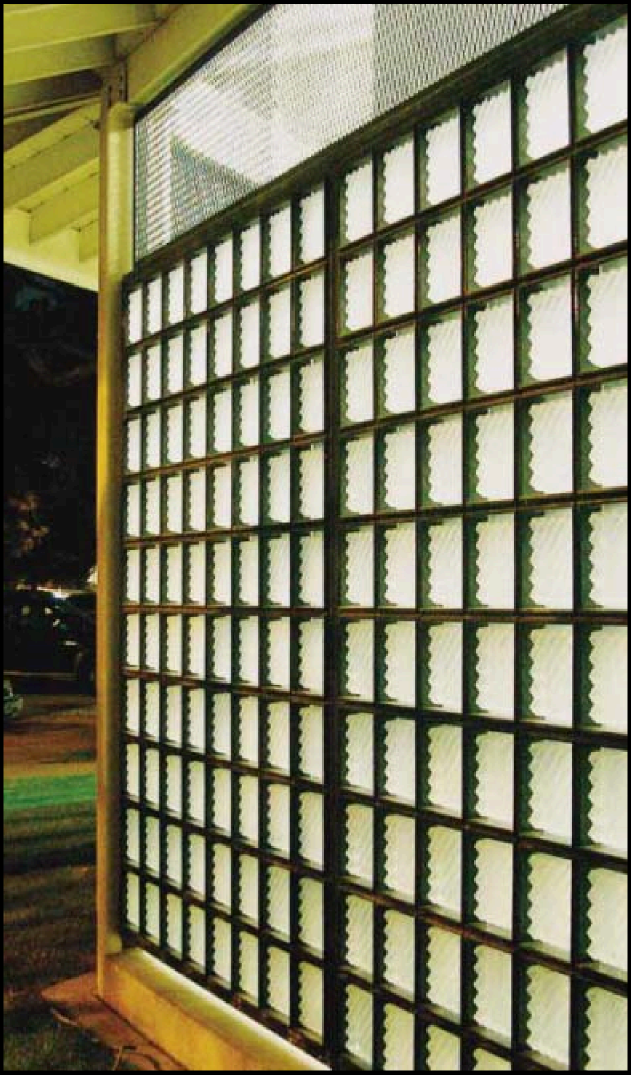

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Lighting Products

▲ Spotlight on another era

Jonathan Browning's luxe line of fixtures takes inspiration from the French industrial and decorative arts of the 1920s, '30s, and '40s. The arms and bodies of all sconces and chandeliers are cast in hand-polished bronze, and are triple-plated in silver or nickel. The Chapelle sconce (above) features a magnified 60-watt incandescent bulb. Jonathan Browning, San Francisco. www.jonathanbrowninginc.com **CIRCLE 215**

▲ Spec-grade downlights, under 3 inches

At 2⅞" diameter, the Evolution Three-Inch family of MR16 recessed luminaires offers the smallest aperture available with specification-grade performance and glare control. Three-Inch offers a complete palette of interchangeable optical assemblies, including general downlighting, adjustable accent, wall washing, and wet location. A Push-Lock trim retention system accommodates ceilings up to 2" thick and allows for tool-free attachment. Lightolier, Fall River, Mass. www.lightolier.com **CIRCLE 217**

▼ Inground color system

The Martin Inground 200 was awarded "Best Product of the Year" at Lightfair 2005. The Inground 200 Series is a range of inground luminaires for illuminating facades, columns, landscapes, and interior applications. The series offers three different color systems: a simple static color, a palette of six colors, or the full spectrum CMY color system. Three different lens systems are currently available for a variety of beam-angle options: medium, wide, and very wide. Martin Architectural, Woodland Park, Colo. www.martin.com **CIRCLE 214**

▼ Illuminating and graceful

The Grace collection is a line of decorative fixtures fabricated with textured glass and intricately polished parts. The long, 2" x 14" blown-vessel shade features an amber-colored base and golden fumed overlay. Handcrafted from solid brass and finished with polished nickel plating, the collection consists of two pendants and three sconce designs with incandescent lamping. Neidhardt, Redwood City, Calif. www.neidhardtinc.com **CIRCLE 216**

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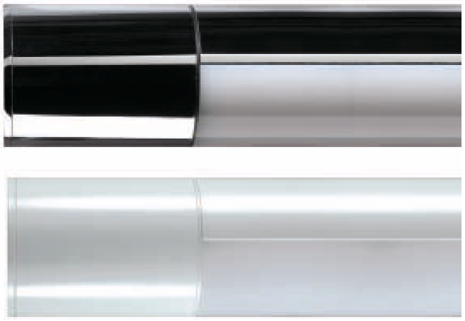

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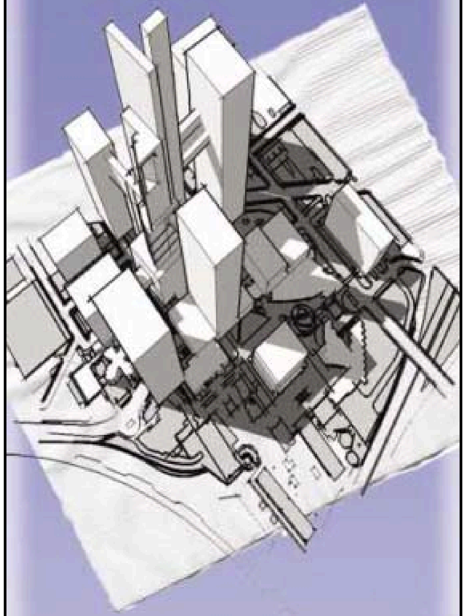

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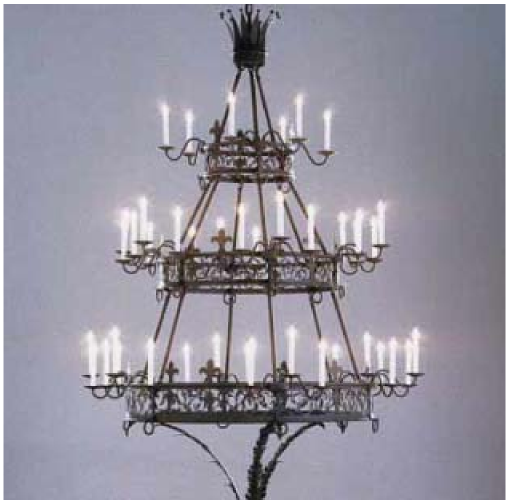
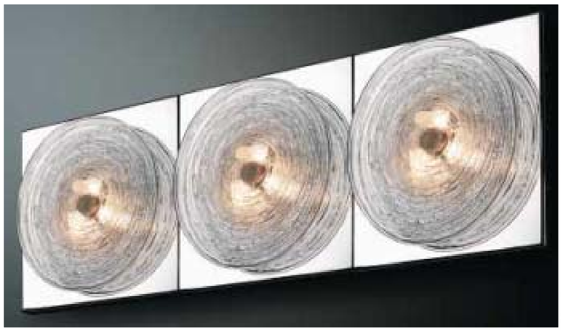
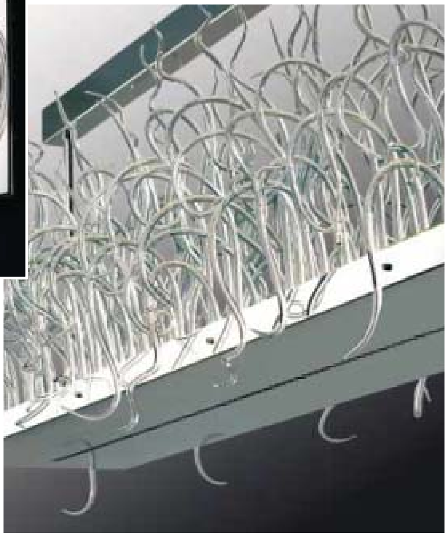
Lighting Products



◄ Dramatic lighting centerpiece

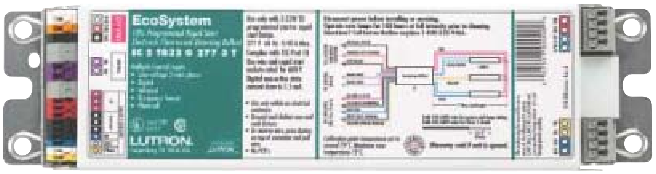
New Metal Crafts introduces a dramatic custom fixture for residential or commercial installations. The traditional fixture is constructed of iron with a painted black finish and is decorated with stamped leaves, fleur-de-lis cutouts, and hanging rings, and is topped with a pointed crown. Rope tubing rods connect each of the three tiers. Standing 7' tall by 60" in diameter, the chandelier is illuminated by 44 "candle" lights. The fixture can be custom made in two tiers or a single tier and has matching sconces and a pendant fixture. New Metal Crafts, Chicago. www.newmetalcrafts.com **CIRCLE 218**





▲► Motion frozen in glass

From the delicate twisting of tree branches to pearlescent drops of water, the 16 designs in Andromeda's DesignAlive Collection capture nature in the medium of Venetian glass. Brio (above) features a hand-spun glass disk floating on a stainless-steel plate and is available in clear Venetian crystal, and red or black glass. Used individually or clustered, Brio's incandescent lamps, available as a wall sconce or ceiling lamp, provide soft illumination. Livia (right) features organic stems of clear Venetian crystal that rise from a shiny nickel frame to highlight the structure's sleek, twisting form. Livia uses halogen, fluorescent, and LED light sources and is available as a wall sconce, floor lamp, or hanging lamp. Leucos USA, Edison, N.J. www.andromedainternational.it **CIRCLE 219**



► Winning ballast system

The new EcoSystem ballast for fluorescent lighting control from Lutron Electronics was another "Best of Category" winner at this year's Lightfair, taking home the top award for ballasts and transformers. The EcoSystem ballast provides daylighting, occupant sensing, personal control, and buildingwide control for any size project. It facilitates any combination of sensors or wallstations to control the lighting environment and energy costs of a space without interface or power packs. Lutron Electronics, Coopersburg, Pa. www.lutron.com **CIRCLE 220**

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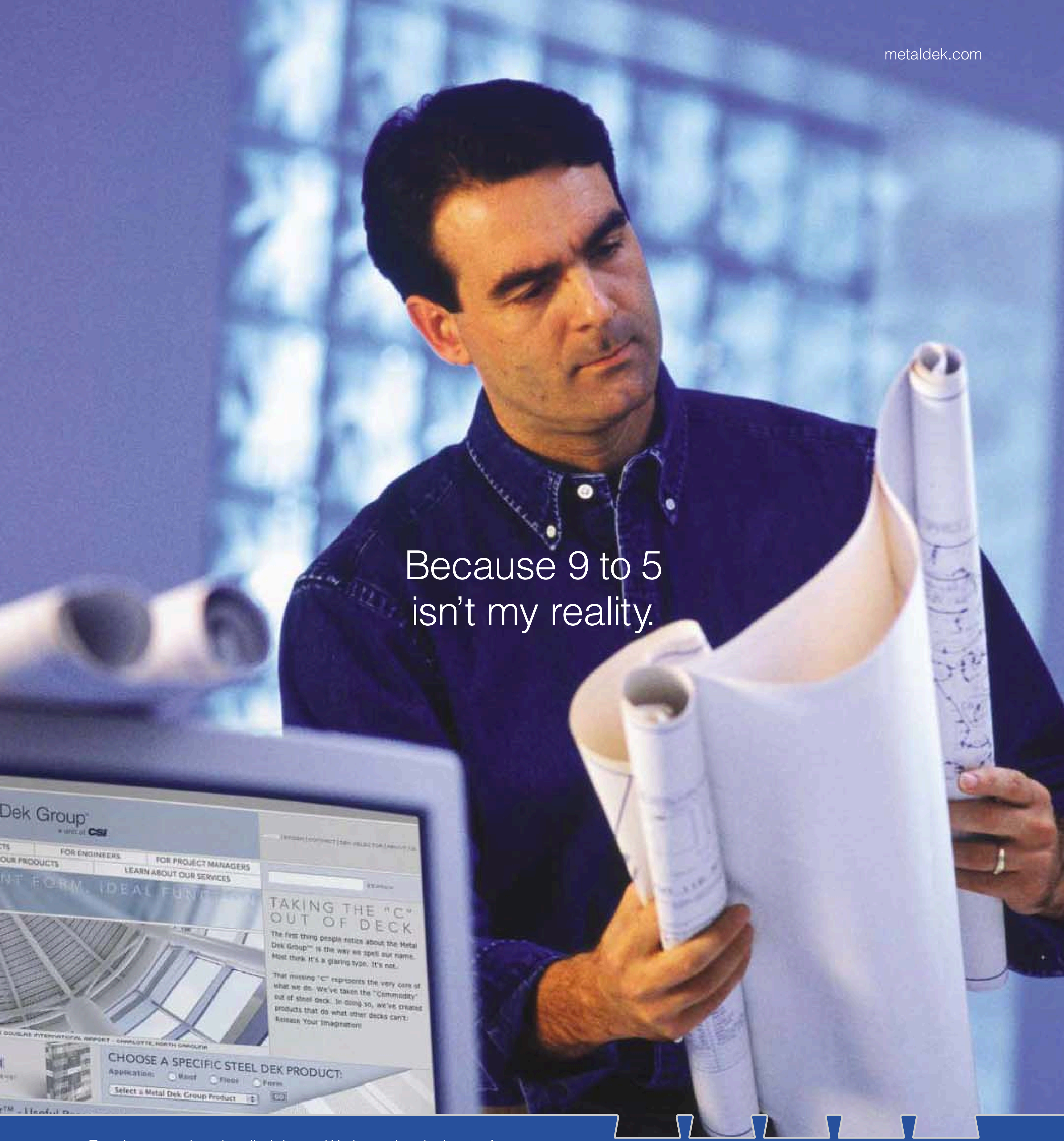
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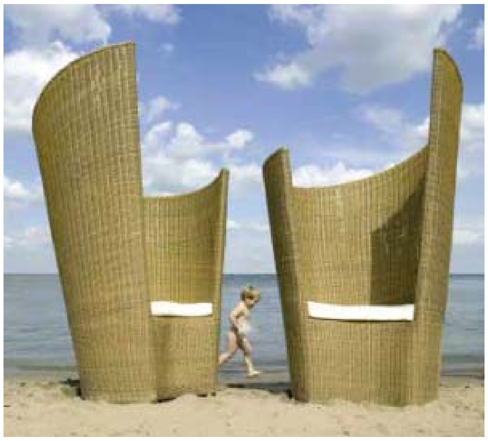
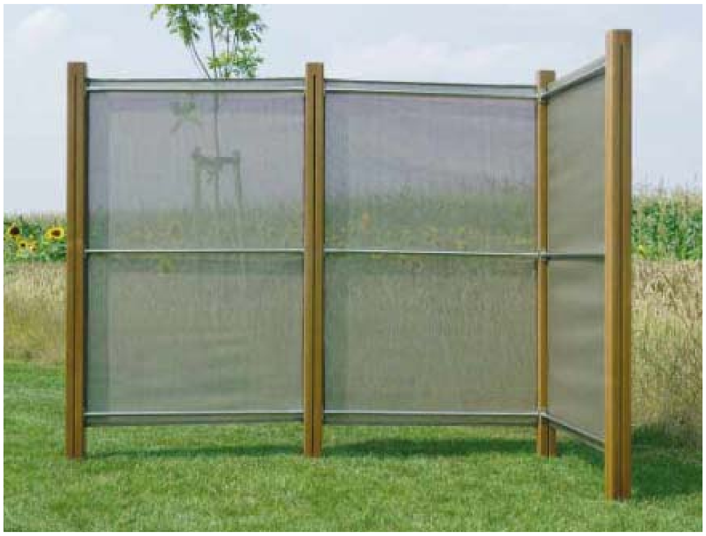
Products Landscape Options

From residential backyards to hotel poolsides, the following **landscape products** allow people to enjoy the great outdoors with minimal hassle. Cleverly designed furnishings, **intelligent gardening aids**, and other products that make outside living more enjoyable are the focus this month. *Rita Catinella Orrell*

Outdoor furnishings with a touch of Dutch whimsy make their U.S. debut





The cocoonlike plu'MO chair is designed for high-impact locations (left). The windBLOKKER provides privacy indoors or out (right).

The casual outdoor furnishings from Netherlands-based Freeline furniture made their U.S. debut at this year's International Contemporary Furniture Fair. Priced to appeal to discerning but more value-conscious costumers (pieces start at $185), the cleverly named items use a variety of materials, including teak and other hardwoods, synthetic and natural rattan, textylene, aluminum, and stainless steel. The pieces work equally well in casual kitchens, sunrooms, decks, patios, and other lawn/garden settings.

Several collections from the company will be spotlighted in the Houses at Sagaponac, a high-profile Southampton development featuring the works of 34 influential Modern architects. Sagaponac developers selected Freeline's cocoonlike plu'MO wicker resort chair, with an outsize half-circle form; the beSKWERE 4 outdoor bistro/dining set; and tjik'NRUN, a table/bench combo for the outdoor spaces of the house designed by Selldorf Architects of New York City.

Other products in the collection include basketCASE, a natural rattan chair; windBLOKKER, a teak/textylene screen for indoor/outdoor use; and hükSED, a teak corner table/chair set. The exclusive North American distributor is Jane Hamley Wells. Jane Hamley Wells, Chicago. www.janehamleywells.com **CIRCLE 221**

New line of landscape products protects the garden, fights the pests

GreenVista Seed Germination Blanket (above) keeps seeds in place and aids in soil erosion control. DuPont's Weed Control Fabric (right) prevents weeds from stealing nutrients from plants.

DuPont GreenVista garden products are a new line of residential and professional landscape products launched at this year's International Builders' Show in Orlando. DuPont's Weed Control Fabric, the centerpiece of the new line, blocks weeds from growing and stealing valuable nutrients from plants, while still allowing water, air, and nutrients to pass through to the plants' roots. Common uses include placing the fabric under mulch, pebbles, stones, and rocks, beneath patios and walkways, under decking, around drains, or behind retaining walls. The fabric is guaranteed to last 15 years when properly installed and covered with 3" to 4" of mulch.

Other introductions in the line include Deer and Bird Netting designed to discourage unwanted deer and birds from eating delicate plants and shrubbery, and landscape anchor pins that secure all types of DuPont landscape fabrics.

As part of a second product rollout, DuPont introduced a protective GreenVista Burlap to help control erosion, keep seeds and plants in place, hold moisture, and promote seed germination, as well as provide protection from harsh climate conditions. A biodegradable Seed Germination Blanket made of excelsior wood fiber and mesh netting will help grass seed germinate and thrive. DuPont GreenVista Products, Wilmington, Del. www.dupont.com **CIRCLE 222**

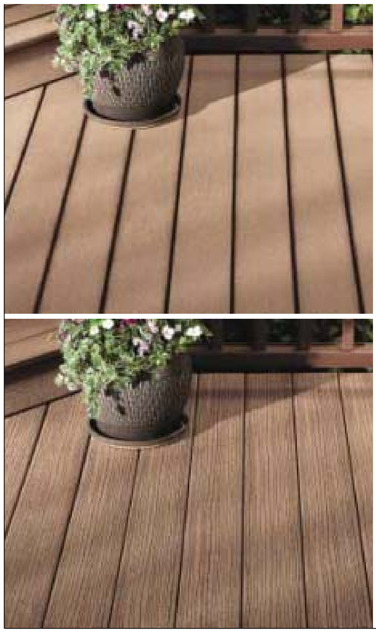
For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.

▼ Turning a backyard into a great room

Fire Stone Home Products' new Outdoor GreatRoom includes an outdoor gas-convection-range island, choice of fireplace or firepit, and a pergola (below). To customize the Outdoor GreatRoom, clients choose a style of Fire Stone Pergola and a grill island with a 24" or 36" Legacy outdoor range. A sink, refrigerator, and other outdoor kitchen amenities can be added. To complete the room, clients choose between a Fire Stone Campfire or outdoor wood- or gas-burning fireplace. Fire Stone Home Products, Minneapolis. www.firestonehp.com **CIRCLE 223**

▲► Sleek teak furnishings

Kingsley-Bate has introduced several new additions to its line of teak outdoor furniture. The Algarve Deep Seating group (above) features the durability of solid teak with Sunbrella-brand cushions. Designed by Frederic Spector, the line is suitable for residential or commercial use. The Asian-inspired Mandalay Group has been expanded to include a bar set, new chaise, eight-seater square table, and backless bench (above right) in both 5' and 6' lengths. This complements the existing dining set, 54" backed bench, and deep seating already available. Kingsley-Bate, Manassas, Va. www.kingsleybate.com **CIRCLE 226**

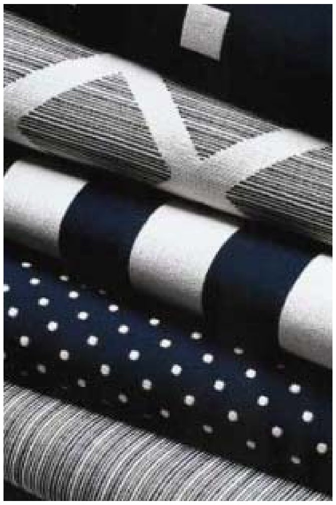


◄ One plank, two looks

Each TwinFinish 5/4 deck plank from TimberTech features two sides with entirely different surface textures. The traditional brushed surface texture (top left) provides a uniform exterior look by texturing the plank's surface to increase exposure of the wood elements within the TimberTech composite material. The wood-grain texture (bottom left), provides the look of vertical grain lumber and ensures that no repetitive pattern will be seen on the deck. The 1'-thick, 5½"-wide planks are available in 12', 16', and 20' lengths. TimberTech, Wilmington, Ohio. www.timbertech.com **CIRCLE 224**

► Take me out

Hinson introduces the I.O. fabric collection, the company's first entry into the indoor/outdoor fabric market. Intended for upholstery, cushions, and umbrellas, the fabrics are fade- and mildew-resistant, and woven in the U.S. of solution-dyed, 100 percent acrylic. The collection features squares, dots, stripes, striés with bold overlay trellises, and simple striés. The squares, dots, and stripes are reversible in colorways of navy, beige, and tan with white, or forest or black with off-white. Coordinated solids are also available. 212/475-4100. Hinson & Company, Long Island City, N.Y. **CIRCLE 225**



▼ Even better than the real thing?

Claimed to look and feel like natural blades of grass, JM Synthetic Grass polyethylene grass substitute can replace real grass on residential yards, parks, day-care centers, athletic facilities, road medians, and housing developments. For schools and playgrounds, the company installs a state-approved, customized application to dirt, asphalt, blacktop, cement surfaces, or even rooftops. The "grass" can be applied to virtually any surface, and features a built-in drainage system and weed barrier. JM Synthetic Grass Surfacing, Rutherford, N.J. www.jmsyntheticgrass.com **CIRCLE 227**

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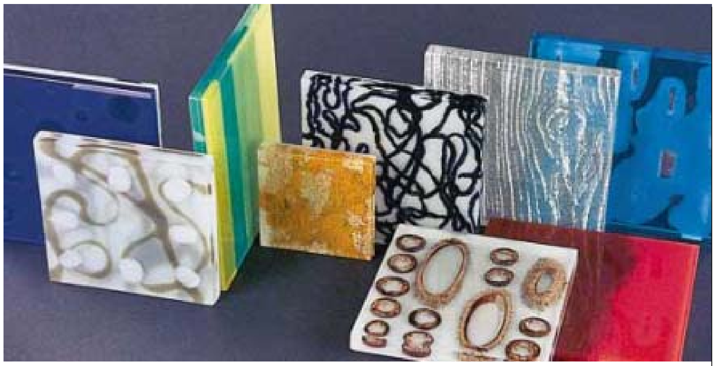
Product Briefs

▲ Beneficial babble

Sonare Technologies, a Herman Miller company, introduces Babble, an award-winning technology that provides voice confidentiality in open-plan work environments. Babble connects to the telephone and sends the user's voice out in multiplied and "babbled" form through proprietary speakers arranged in the work area. Those in the user's immediate area hear what sounds like an indiscernible, low-volume group conversation. Sonare Technologies, Chicago. www.sonaretechnologies.com **CIRCLE 228**

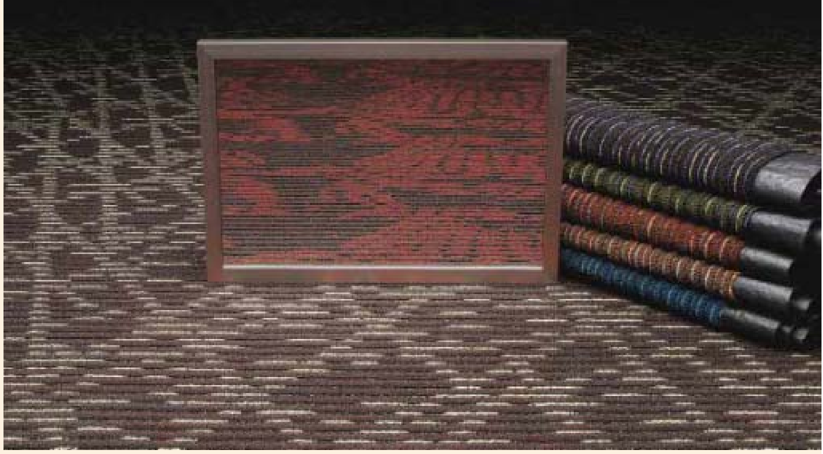


▲ Suspended animation

Lumicast Folio, from Skyline Design, is a new collection of objects and pigments suspended in a clear polymer. Unlike laminated sheet products, all panels are hand-cast by artisans to exact specifications, eliminating excess waste. Most 3D objects less than ⅝" in thickness can be successfully cast in a panel. Offered in standard thicknesses of ¾" and in sizes up to 55" x 117", the material's light-transmitting quality makes it appropriate for feature walls, light diffusers, and most vertical applications. Skyline Design, Chicago. www.skydesign.com **CIRCLE 230**

◄ Image transfer process

Infused Imagery, a material innovation for metal, fiberglass, glass, and acrylic surfaces, won a Gold Award for Deepa Textiles in this year's Best of NeoCon Surfacing Materials category. A patented image-transfer technology allows the image to become part of the substrate, giving it the hardness of epoxy with the flexibility of urethane. The technology carries a Class A fire rating as well as a low-VOC-emissions rating. Deepa Textiles, San Francisco. www.deepa.com **CIRCLE 231**

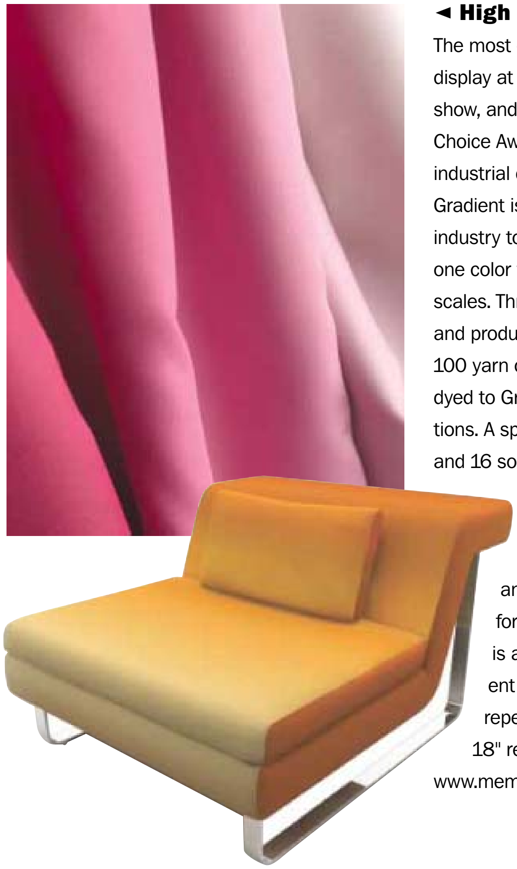


Product of the Month Product 2Faced

Using a patent-pending manufacturing technology developed by Lees, Product 2Faced achieves an optical illusion through tufting and multiloop pile heights. Taking home an Innovation Award in this year's Best of NeoCon competition, the broadloom carpet's use of 4D tufting technology plays with multiple pile heights to virtually hide colors, depending on the angle from which it is viewed.

Available in both broadloom and tile, Product 2Faced offers a color palette of 15 clear, saturated, yarn-dyed colors to complement the product's three patterns: I-spy, Alter Ego (carpet shown above on the floor and reflected in the mirror), and Still Moving. Lees collaborated with the Chicago-based multidisciplinary studio CleverSpin, which utilized time-lapse photos, X-ray imagery, and other time-based or transformative images, to develop synchronous patterns around the idea of time and change.

Product 2Faced features Duracolor stain-resistant dye technology and is Scientific Certification Systems and CRI Green Label Plus certified. Lees Carpets, Kennesaw, Ga. www.leescarpets.com CIRCLE 229



◄ High grades

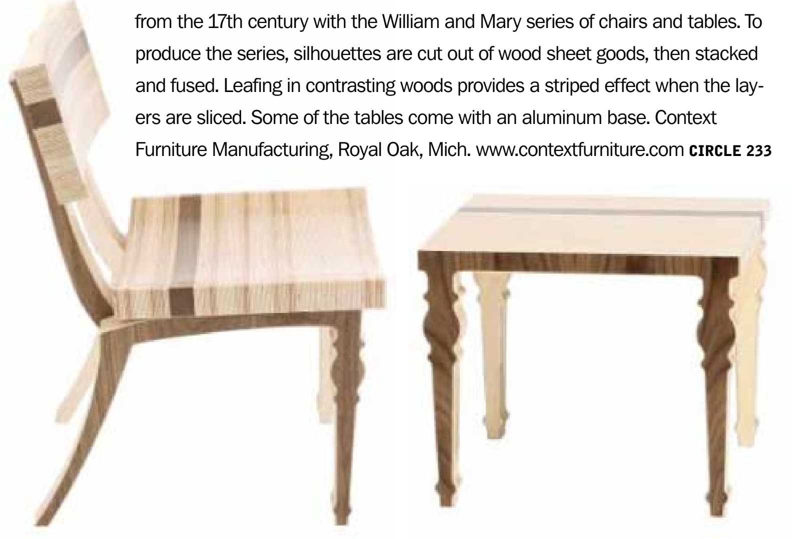
The most eye-catching textile on display at this year's NeoCon trade show, and winner of an Editor's Choice Award, was designed by industrial designer Cory Grosser. Gradient is the first fabric in the industry to graduate smoothly from one color to another on different scales. Through a rigorous design and production process, more than 100 yarn colors have been custom dyed to Grosser's exact specifications. A spectrum of eight gradients and 16 solids that match the end colors of each gradient are available in a subtle rib weave for seating and a smooth satin weave for panel. Each combination is available on vastly different scales, including a 144" repeat, a 36" repeat, and an 18" repeat. Textus, Irvine, Calif. www.memosamples.com **CIRCLE 232**

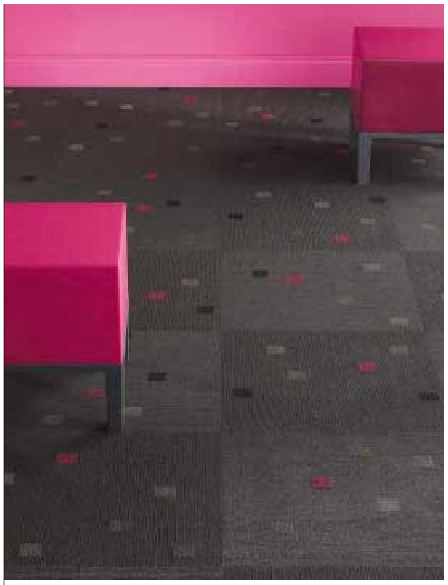
For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.

Product Briefs

▼ Iconic design, with a twist

Bryce and Kerry Moore, the husband-and-wife design team behind Context Furniture Manufacturing, both parody and celebrate the iconic look of a chair from the 17th century with the William and Mary series of chairs and tables. To produce the series, silhouettes are cut out of wood sheet goods, then stacked and fused. Leafing in contrasting woods provides a striped effect when the layers are sliced. Some of the tables come with an aluminum base. Context Furniture Manufacturing, Royal Oak, Mich. www.contextfurniture.com **CIRCLE 233**



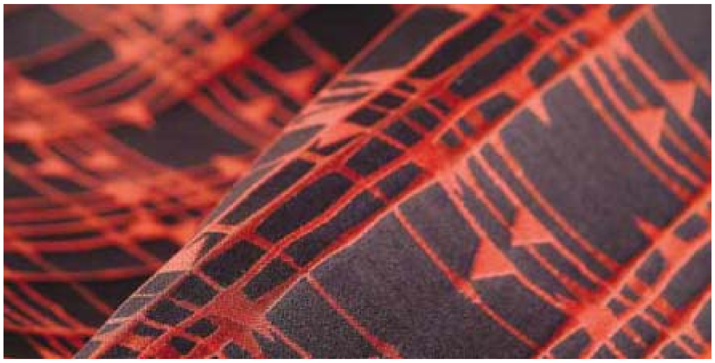


▲ It's hip to be square

For the L7 collection for Shaw Contract, Bruce Mau Design interpreted individual carpet tiles as "pixels" of color in a range of pattern scales. According to principal Bruce Mau, working with Shaw was "one of the best collaborative processes I've ever been involved with." To achieve the color richness and depth intended by the Bruce Mau Design team vision, Shaw employed a new technology that allows for precision cutting in tufted carpet that is typically only seen in printed products. L7 features two broadloom products and four tile products, and won a Gold Award at NeoCon for modular carpeting. L7 offers the environmental benefits inherent in carpet constructed of Eco Solution Q fiber and EcoWorx tile backing. Shaw Contract Group, Dalton, Ga. www.shawcontractgroup.com **CIRCLE 234**

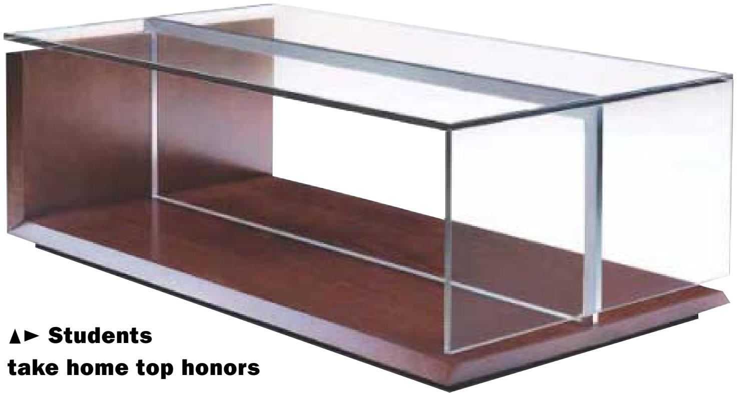
▼ Chair body art

One of Carnegie's latest introductions, Tattoo, interprets the art of body tattooing into woven upholstery textiles. Wired (below) is inspired by ancient tribal imagery; Co-Exist has graffiti-influenced flare; Soleil features sun symbols; Ink celebrates the contours of the body; Full Sleeve symbolizes fully tattooed arms or full suites of abstract tribal patterns; and Flash Art represents the source of inspiration for the tattoo artist. Carnegie, Rockville Centre, N.Y. www.carnegiefabrics.com **CIRCLE 235**



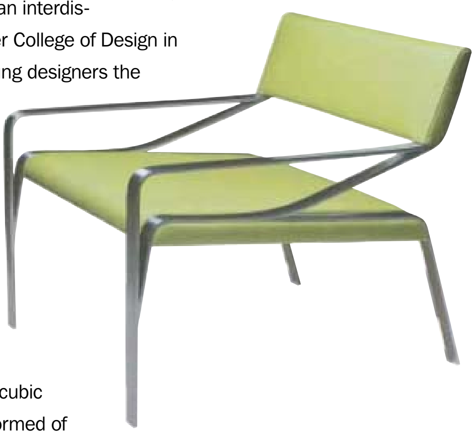
► Clearly safer fire door

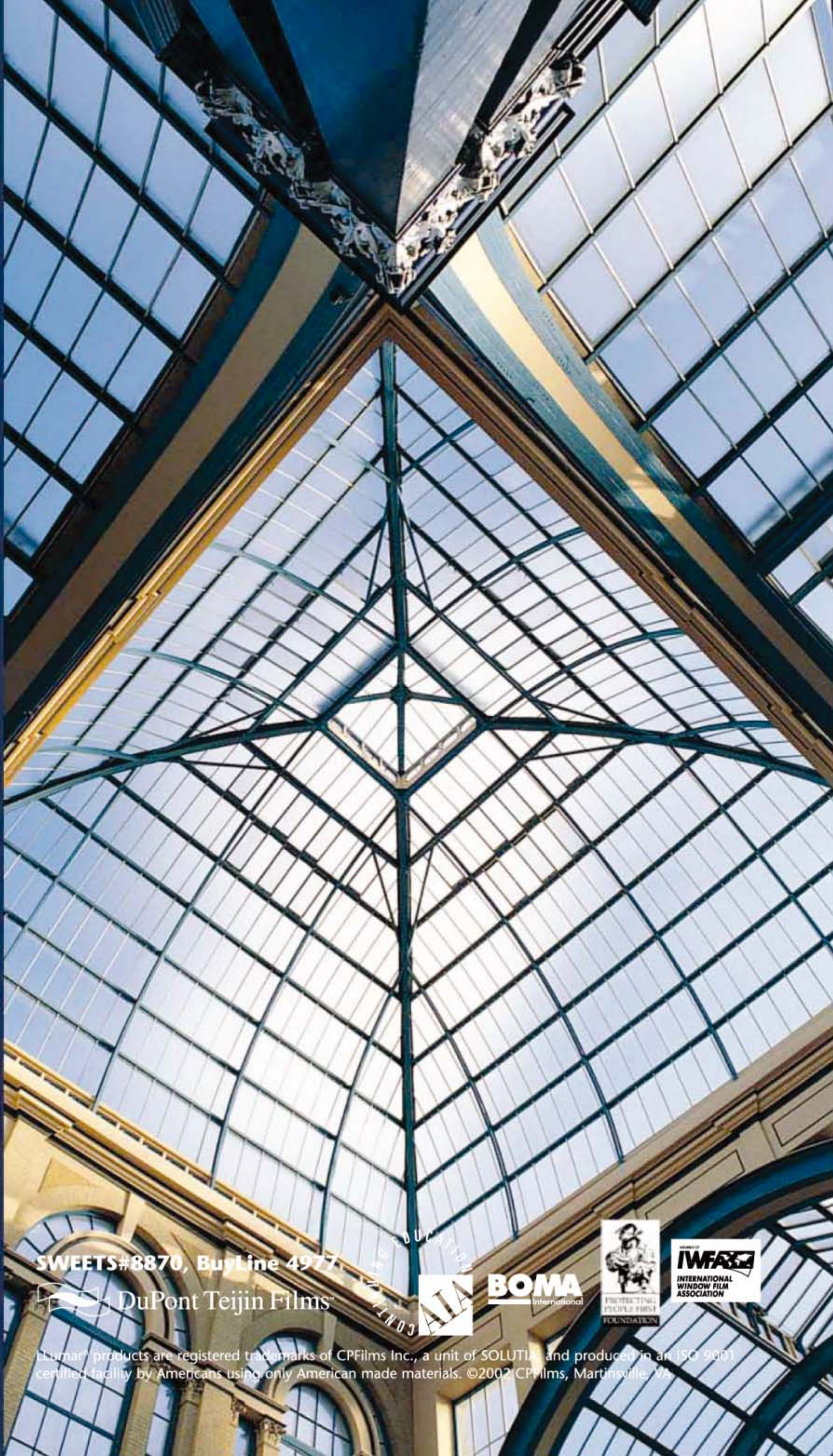
A collaboration between glass supplier Vetrotech Saint-Gobain and hardware supplier Grand View Glass & Metal, the All-Glass fire-rated door is currently the only such product available in North America, and was the first ever developed in the world. The All-Glass door has a 20-minute fire rating, making it ideal for office door applications located in 1-hour-rated corridors. It utilizes Vetrotech's Safeglass, a float glass product made of earth alkaline silicate. Vetrotech Saint-Gobain, Auburn, Wash. www.vetrotech.com **CIRCLE 236**



▲► Students take home top honors

This year, Bernhardt sponsored an interdisciplinary course at the Art Center College of Design in Pasadena, California, to give young designers the opportunity not only to create products appropriate for the market and the company, but also to work within the constraints of mass production. Ultimately, eight products designed by seven students were selected for marketing, launch, and distribution. The designs include Float (above), a cubic table designed by Ana Franco, formed of two folded wood or glass pieces and connected by a thin slice of metal, and Emi (right), a lounge chair designed by Emi Fujita that channeled her skills as a sculptor and calligrapher. The collection took home top honors with the Best of Competition at this year's NeoCon, as well as the ICFF Editors Award for New Designer, giving the students a great boost to their young careers. Bernhardt Design, Lenoir, N.C. www.bernhardtdesign.com **CIRCLE 237**





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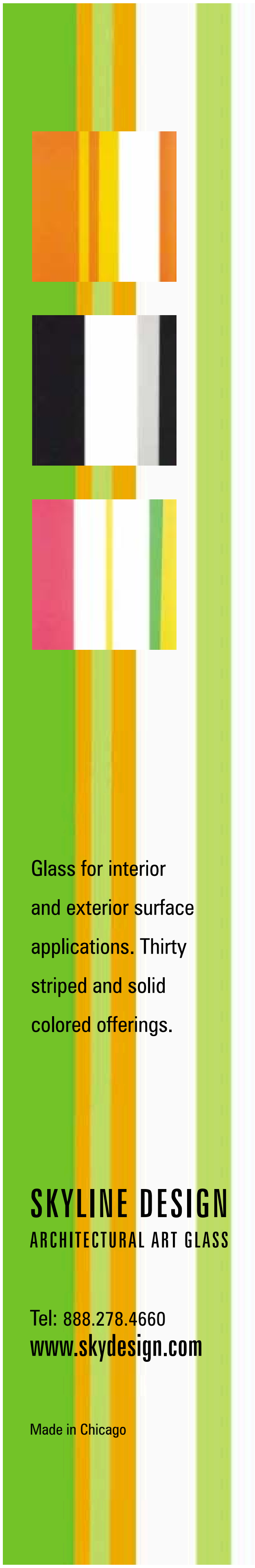

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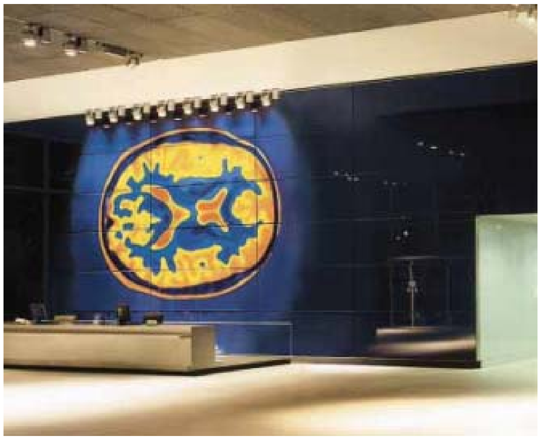
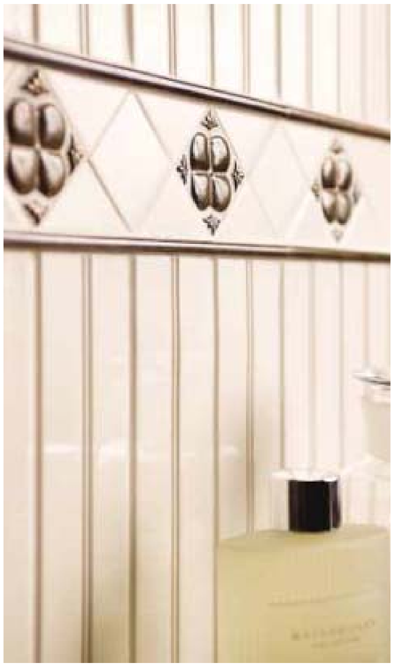


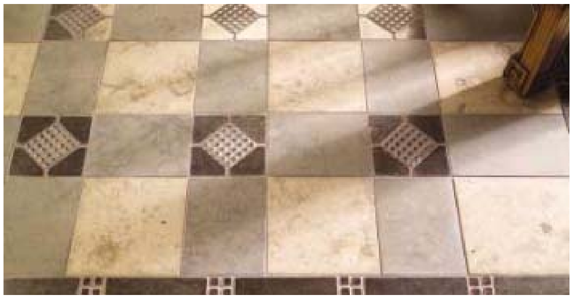
◄ Digitally color-printed glass

Okacolor, new from Schott, uses a specially developed glass-coating technique that allows the complete reproduction of black-and-white and multicolored images, as well as solid-color coatings on heat-strengthened or tempered float glass. The glass can be used as monolithic single glazing, in laminated glazing, or insulating glass, depending on coating buildup. For the Tanaka Business School at Imperial College in London (left), Foster and Partners specified an Okacolor wall featuring the reproduction of an MRI of a human brain, designed by Danish artist Per Arnoldi. Schott N.A., Elmsford, N.Y. www.us.schott.com **CIRCLE 238**

► Windows to meet a growing market

To offer a better solution for architects needing easy-to-operate, high-performing, and historically compliant double-hung windows in large sizes, Marvin has introduced the Ultimate Double Hung Magnum. The window allows designers to use large wood windows where they previously had to use an alternate material to meet performance standards. Expected to be available in fall 2005, the window meets a commercial design pressure rating of H-C50 for window openings nearly 5' wide and 9' tall. Larger sizes are available at a commercial design pressure rating of H-C30. A spiral balance system allows the large window to achieve easy, smooth operation. Marvin Windows and Doors, St. Paul, Minn. www.marvin.com **CIRCLE 239**





◄▲ Jewelry for the walls and floors

Rocky Mountain Hardware has added a line of cast-bronze tiles to its collection of handcrafted bronze architectural hardware and accessories. Cast in solid bronze, the tiles are suitable accents for floors, countertops, and shower walls, or can be grouped to cover an entire surface, such as a backsplash. The tiles are available in two types of bronze, seven patinas, and more than 70 styles, including Clover (left) and Offset (above). A proprietary “grout through” tile design features preset channels that create the effect that several pieces of bronze were set individually. Rocky Mountain Hardware, Hailey, Idaho. www.rockymountainhardware.com **CIRCLE 240**

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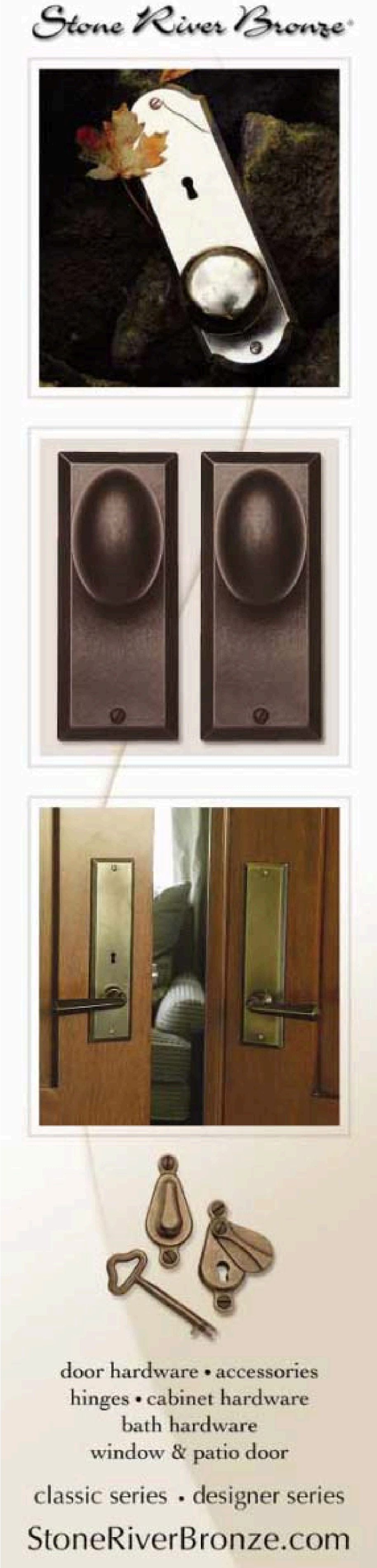

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Product Briefs

► Flush with style and safety

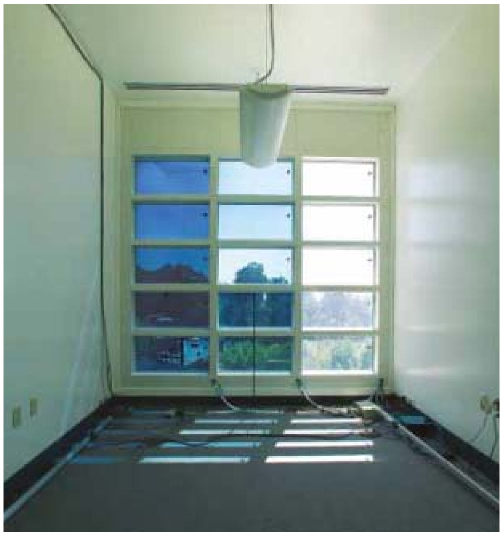
An alternative to the ubiquitous hockey-pucklike devices seen on most ceilings, the Modern Smoke Detector from Architectural Devices uses a patented design to lie recessed and flush-mounted to the surface of a wall or ceiling. The detector can be hardwired, hardwired with battery backup, or battery-powered, and can be made part of a whole building alarm system. The smoke detector uses recyclable plastic and a photoelectric sensor rather than older technology, which contains small amounts of radioactive material. The detector is currently undergoing U.L. testing and is expected to ship by the end of the year. Architectural Devices, San Francisco. www.architecturaldevices.com **CIRCLE 241**

◄ Cleaner shower with less water

Sloan Valve's Act-O-Matic 2.5-gpm-flow showerheads use a pressure-compensating flow control that provides a consistent and powerful flow at low pressures, saving water. The chrome-plated, all-brass showerheads incorporate a self-cleaning spray disc that eliminates sand and other particles after each use. When the water is turned off, the disc retracts to its fast-drain position, and sand and other particles are then washed away. The fast-drain position also prevents residual slow dripping after showerhead use. Act-O-Matic standard models come with or without a thumbscrew, and there is an institutional style with integral mounting flange. The models are available in four finishes. Sloan Valve, Chicago. www.sloanvalve.com **CIRCLE 242**

► Tintable commercial exterior glass

Wausau has teamed with SAGE Electrochromic glass to offer Sage Glass electronically tinted windows. Now available on a limited basis for commercial, institutional, and health-care buildings, the windows help control glare, reduce heat gain, and block ultraviolet rays while increasing the benefits of daylighting and maintaining a connection to the view outside. SAGE produces SageGlass lites by coating float glass with several layers of invisible ceramic material, then fabricates these coated lites into IGUs. Wausau then glazes the IGUs into its aluminum framing systems. Once shipped to the site, the windows are installed into the building's electrical system and are operated individually by the occupant or automatically by the energy-management system. Wausau Window and Wall Systems, Wausau, Wis. www.wausauwindows.com **CIRCLE 243**



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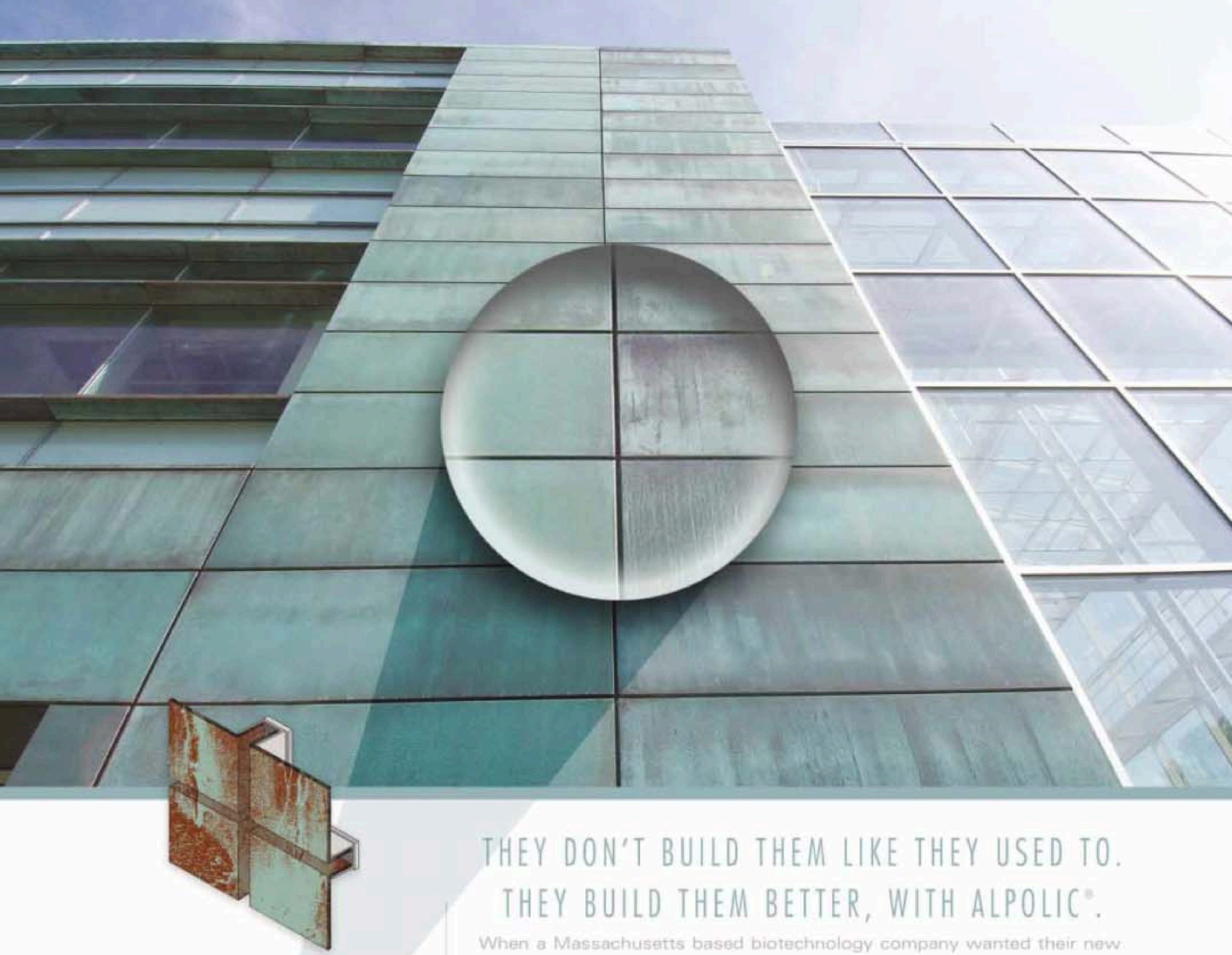

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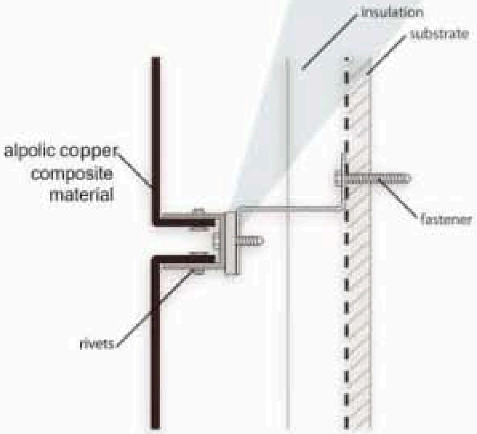

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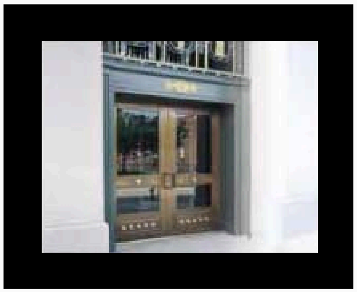

Superior Courthouse, Hartford, Connecticut

Architect:The Malmfeldt Associates

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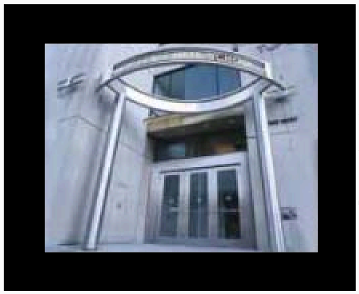


Tufts Dental School, Denver, Colorado

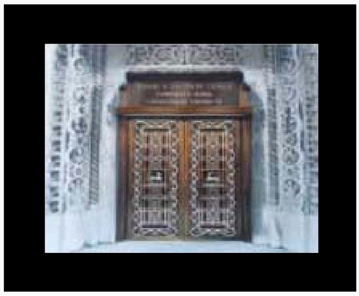
Architect:Perry, Dean & Associates

COMMERICAL

Tiffany's, Beverly Hills, California

Architect:Bermari & Berrolini

RESTORATION



Temple Emanuel, New York, NY

Architect:Dan Barteluce PC Architects

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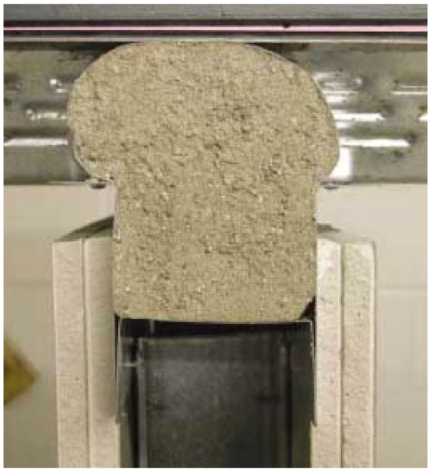
Product Briefs

◄▼ Borrowing some technology from Mother Nature

Lotusan is an exterior coating recently introduced into the North American market by Sto that features a pronounced self-cleaning effect. Modeled on the microstructure of the lotus leaf (below), the coating features Bionics technology that imparts super-hydrophobic properties to the coating. The “Lotus Effect” is actually a natural phenomenon discovered on the Asian lotus plant: After each rainfall, the plant leaves are immaculately clean and dry, as all the dirt has run off with the raindrops. The coating's self-cleaning effect (far left) makes it highly resistant to soiling, mold, mildew, and algae. Lotusan was first introduced in Europe in 1999 and has been applied to more than 300 million square feet of facade surfaces. Sto, Atlanta. www.stocorp.com **CIRCLE 244**

► Not seeing glass for what it is

While clear glass reflects 8 percent of visible light, Pilkington OptiView antireflective glass reflects less than 2 percent, allowing viewers to clearly see objects behind the glass without looking at their own reflection. Until now, antireflective glass was made by making clear glass, then dipping sheets of the glass into vats that contained a chemical composition that produced the antireflective properties—limiting the glass size to the vat size. Since the antireflective properties of OptiView glass are added during Pilkington's pyrolytic manufacturing process of float glass, there is greater size flexibility for applications such as retail store fronts and showrooms where antireflective glass was not previously an option. Pilkington N.A., Toledo. www.pilkington.com **CIRCLE 245**



◄ Three-component fire-stopping system

The FlameSafe FlowTrak system from Grace Construction Products is a new fire-stopping technology that addresses the limitations of conventional head-of-wall fire-stopping systems. Designed for applications into head-of-wall joints between the top of fire-resistive gypsum wall and floor/roof assemblies, FlowTrak provides a faster, cleaner, simpler, and more accurate alternative to the conventional “stuff and spray” technique, according to the manufacturer. The system features three components: metal tracks attached to the ceiling, polymer composite bags affixed to the tracks, and a nonshrinking, portland-cement-based fire-resistive material that forms a solid, permanent firestop. Grace Construction Products, Cambridge, Mass. www.graceconstruction.com **CIRCLE 246**

For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.

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Landmarks in Brick

Sizes & Shapes

More sizes mean lower wall costs. With as many as sixteen different sizes to choose from Belden has the size you need. Plus, Belden has made thousands of special shapes to provide special details for individual projects. Need an "impossible" shape for your project? Then call Belden Brick and learn how the impossible can become reality.

Textures

Belden Brick offers thirteen different textures that range from silky smooth finishes to rugged randomly textured styles. Each texture can make its own distinctive contribution to the visual impact you seek.

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Product Literature

Controlling moisture

Centria has developed a handbook, titled *Studies in Advanced Thermal & Moisture Control*, that reviews the impact of mold and moisture on the building industry. The Centria recommendation for thermal and moisture control in exterior walls includes specifying nonporous materials, locating insulation outboard of steel studs, limiting the number of components and construction trades, specifying wall systems with rainscreen and pressure-equalized joinery, and specifying only single-component wall systems. Centria, Moon Township, Pa. www.centria.com **CIRCLE 250**

Track lighting spotlight

W.A.C. Lighting has introduced a new catalog on Precision Spots, a new line of upscale, specification-grade track heads for retail and commercial applications where high performance, fit, and finish are critical. The new line of track lighting was designed for retail spaces, museums, libraries, upscale homes, and other architectural environments. W.A.C. Lighting, Garden City, N.Y. www.waclighting.com **CIRCLE 251**

Steel market report

The American Iron and Steel Institute has published the *AISI Market Development Progress Report 2004–2005*, which provides an update on achievements made by AISI's Market Development member companies to keep steel competitive in the automotive, construction, and container markets. The report highlights market breakthroughs such as new steel bridge technologies being utilized in 42 states, a growth in the use of steel in the residential roofing market by over 400,000 tons, and the expansion of light-gauge steel framing in commercial and residential construction by over 2 million tons per year. American Iron and Steel Institute, Washington, D.C. www.steel.org **CIRCLE 252**

Easier to find lighting

Paramount Industries has released its latest full-line catalog. The reorganized catalog allows designers and engineers to quickly find the appropriate luminaire for their needs by application or product type. Photometric data is also now included with each product. Paramount Industries, Croswell, Mich. www.paramountlighting.com **CIRCLE 253**

PRECISION SPOTS

AISI Market Development Progress Report 2004–2005

Studies In Advanced Thermal & Moisture Control

EXTERIOR WALLS

CENTRIA

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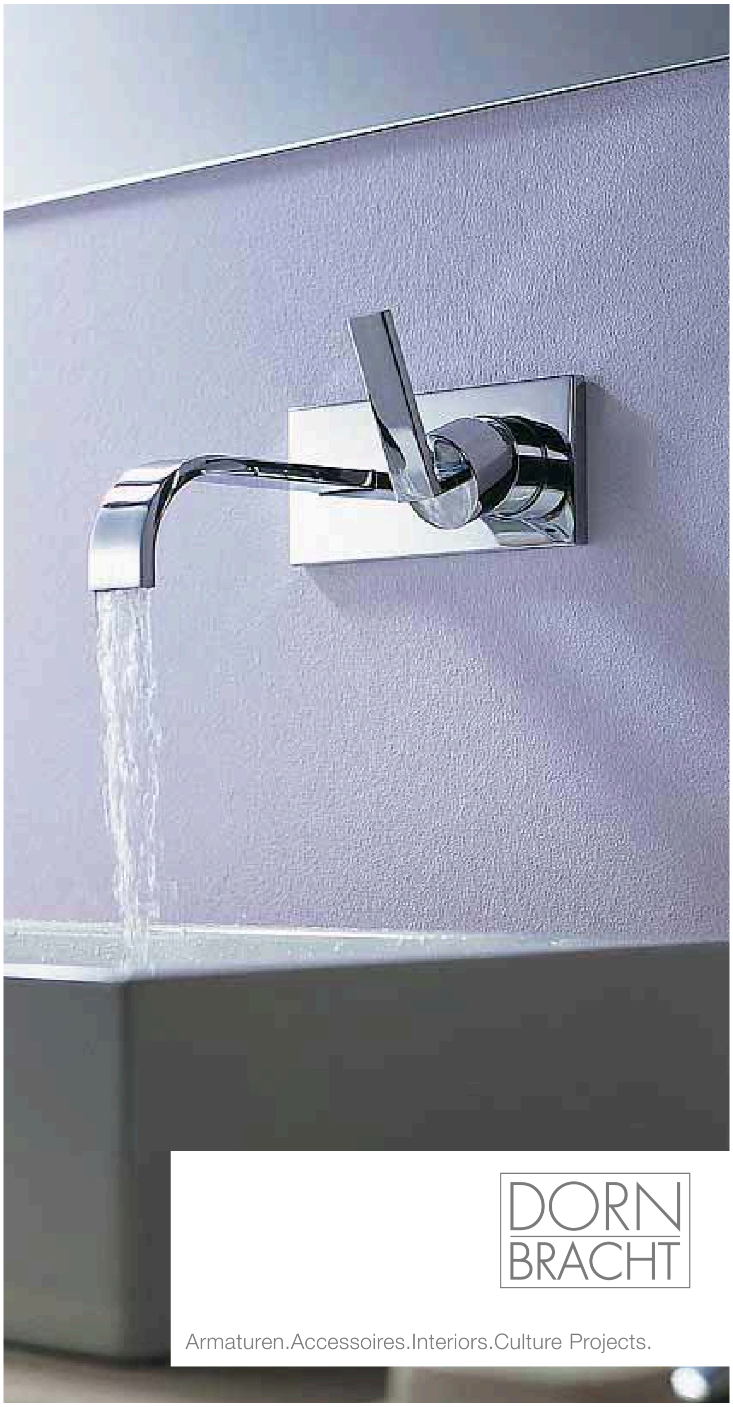

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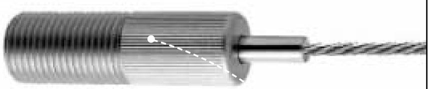

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Product Literature

Educational pamphlet

TerraTEXT 5 is the latest educational pamphlet produced by Interface Fabrics to explain the issues that help the company reduce its environmental impact. The pamphlet is directed at "closing the loop" in the life of the fabric either through recycling or composting. It addresses how Interface Fabrics plans to collect polyester fabrics and turn them into viable products for resale, as well as how the new bio-based fabrics can be turned back into high-quality compost. Interface Fabrics Group, New York City. www.terratex.com **CIRCLE 247**

Clips and connectors catalog

Dietrich Metal Framing Systems offers a 144-page catalog titled *Metal Framing Clip, Connector, and Framing Hardware.* The catalog is divided into seven major product categories: deflection clips and connectors; head of wall deflection systems; rigid connectors; floor joist framing connectors; bridging, bracing, and backing systems; truss framing; fire-rated connectors; and specialty clips. Dietrich Metal Framing, Columbus, Ohio. www.dietrichmetalframing.com **CIRCLE 248**

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Updated site allows visitors to seek info by performance-related system, product type, brand name, or application.
www.usg.com

Mirage Dreamer is a new Web-based personal design assistant for professionals and consumers.
www.miragefloors.com

Color posters

Alcoa Home Exteriors' new paint-deposit-chip posters serve as portable color tools that allow homeowners and contractors to see more than 700 colors available in their new DreamColor palette. The three posters, one from each product line—vinyl, and metal and injection molded (i.e., shutters and vents)—use paint deposits to depict the array of colors available. Alcoa Home Exteriors, Pittsburgh. www.alcoahomes.com **CIRCLE 249**

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ATTENTION ALL BUILDING PRODUCT MARKETERS:

PLEASE SUBMIT YOUR NEW PRODUCTS TO ARCHITECTURAL RECORD'S PRODUCT REPORTS 2005

Product Reports will again be a major editorial feature in the December issue of ARCHITECTURAL RECORD, presenting the most interesting and useful new building products that will be available to the architect, specifier, and designer in 2006. A panel of architects, consultants, and editors will select products for publication from those submitted by September 2, 2005—and we very much want your company to be included.

Like every **Product Reports** since our first in 1972, this feature, which is an A&D reference to product introductions of the previous year, provides our readers with the most up-to-date information available.

There's no entry fee. Just review the product categories listed under "Products" at **www.archrecord.com** to locate the section most appropriate for your product. Our panel will view each product category as a group, so please include an image of each submission in a slide, transparency, glossy color photo, or color printout of a digital image. If you send a CD, you must provide a labeled color printout of each image that is on the disk. Please make sure the digital image is a high resolution TIFF (300 DPI, at least 4 x 5 inches). If you have a labeled sample of your product (no larger than 8 x 10 inches), please include it with your submission. E-mailed submissions will not be accepted.

Send the submission form (following page), image, sample, and descriptive material to:

Rita Catinella Orrell
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New York, NY 10121

If you have any questions, send a note to the Products Editor, Rita Catinella Orrell, at rita_catinella@mcgraw-hill.com.

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(See "Products" at www.archrecord.com for possible listings. For multiple submissions, please photocopy form. Submissions are limited to three per main category—furnishings, lighting, etc. Do not tape slides to form. Only send products introduced after September 2004. Do not send a CD without including a color printout.)

2. **Indicate type of image included with this form:**

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(Photography returned only upon request.)

3. ☐ **A 50- to 60-word description of the building product, or a press release, catalog page, or insert that gives pertinent architectural and performance information is included.**

4. ☐ **A labeled sample no larger than 8 x 10 inches is included (optional).**

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6. **Send this form, product photography, and descriptive material to:**

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August 2005 Issue

ARCHITECTURAL RECORD

Dates & Events

New & Upcoming Exhibitions

Investigating Where We Live
National Building Museum
August 13–October 9, 2005
This exhibition showcases the results of the National Building Museum's five-week outreach program "Investigating Where We Live" (IWWL). The program teaches young people to use photography as a tool for exploring and documenting neighborhoods in Washington, D.C. Through this process, they gain an understanding of city planning, architecture, photography, and exhibition design. The neighborhoods explored this year are Anacostia, Navy Yard, and the New York Avenue corridor. At the National Building Museum. For further information, call 202/272-2448 or visit www.nbm.org.

Jean Prouvé: Three Nomadic Structures
West Hollywood
August 14, 2005–November 27, 2005
The first American presentation of the work of celebrated French designer and architect Jean Prouvé (1901–84), this exhibition includes furniture, vintage photography by Lucien Hervé, and architectural elements that address the most important aspects of Prouvé's practice: technological innovation, itinerant housing, the development of modular systems, and the use of aluminum. The exhibition installation, designed by Evan Douglis, is inspired by Jean Prouvé's commitment to exploring the most advanced technology of his time. At the Museum of Contemporary Art (MOCA) Pacific Design Center. Call 213/626-6222 or visit www.moca.org.

2005 Serpentine Gallery
Pavilion Program
London
Summer 2005
Portuguese Pritzker-Prize-winning architect Alvaro Siza and his long-time collaborator the distinguished architect Eduardo Souto de Mouro will design the next Serpentine Gallery Pavilion. Since the commission was launched in 2000, it has resulted in four landmark temporary structures. At the Serpentine Gallery. For further information, call 020/7402-6075 or visit www.serpentinegallery.org.

Sheila C. Johnson Design Center at
Parsons: A Celebration
New York City
September 14–November 8, 2005
This exhibition will celebrate the creation of a new campus center at Parsons, designed by Lyn Rice Architects, with drawings, models, and full-size mock-ups of construction details. In addition, Parsons will highlight current and recent work by Lyn Rice Architects, including the Dia:Beacon, and introduce the center's benefactor, the noted philanthropist Sheila C. Johnson. For more information, call 212/229-8919 or visit www.parsons.edu.

Raymond Loewy: Designs for a
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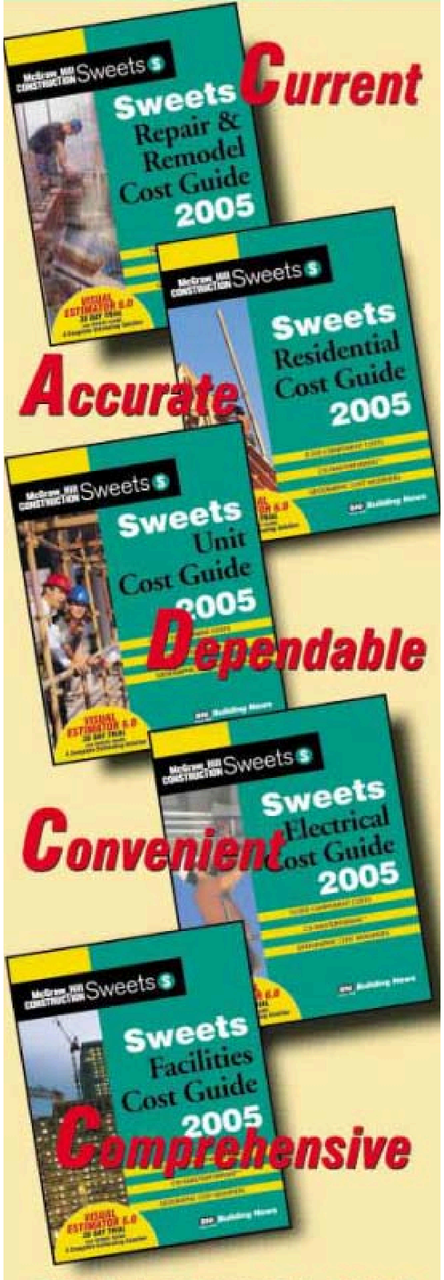
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Dates & Events

Atlanta
September 15–December 23, 2005
A pioneer of industrial design, Loewy crafted a signature style by blending the traditional with European Modernism. The exhibition showcases the work of Loewy and his associates with an array of drawings, models, products, advertisements, photographs, archival documents, and rare footage of Loewy over five decades. It brings together the career of the prolific and influential figure who did much to define the culture of consumption. At the Museum of Design Atlanta. For information, call 404/688-2467 or visit www.museumofdesign.org.

Frank Lloyd Wright and Taliesen: The Photographs of Pedro Guerrero
Chicago
September 16–November 19, 2005
From 1939, when Taliesen set up its western front in Arizona, to the death of Wright in 1959, Guerrero created some of the greatest architectural photographs of the last century. The open access Wright granted the photographer ensured that the images became a true biography of the legendary architect. At Architech Gallery. For information, call 312/475-1290 or visit www.architechgallery.

Renewing Wright
Pittsburgh
October 1, 2005–January 15, 2006
This exhibition brings together two iconic buildings by Frank Lloyd Wright with, in each case, an associated project by a leading visionary architect of today. At the Heinz Architectural Center, Carnegie Museum of Art. Call 412/622-3131 or visit www.cmoa.org.

Prairie Skyscraper: Frank Lloyd Wright's Price Tower
Bartlesville, Okla.
October 14, 2005–January 15, 2006
An exhibition of approximately 108 drawings, models, photographs, documents, building components, and furnishings to mark the building's 50th anniversary. Visitors will be able to tour both the exhibition and the building's historic Frank Lloyd Wright interiors. At the Price Tower Arts Center. Call 918/336-4949 or visit www.pricetower.org.

In Pursuit of Pleasure: Schultze and Weaver and the American Hotel
Miami Beach, Fla.
November 13, 2005–May 28, 2006
Leonard Schultze and S. Fullerton Weaver were the preeminent architects/designers of American hotels in the 1920s and 1930s.This exhibition focuses on the firm's hotels, which include the Waldorf Astoria, Sherry-Netherland, Pierre, Breakers, Biltmore Chain, Nautilus, and Roney Plaza. At the Wolfsonian-FIU Museum, which owns the entire Schultze and Weaver archive. Visit www.wolfsonian.org.

The Design Workshop: Seven Years of Design Build at Parsons
New York City
November 17–December 19, 2005
This exhibition showcases seven years of The Design Workshop, an annual program in which graduate architecture students at Parsons collaborate with nonprofit organizations in New York City to design and build a project over a period of eight months. At Parsons, The New School for Design. For information, call 212/229-8919 or visit www.parsons.edu.

Anarchy to Affluence: Design in New York, 1974–1984
New York City
January 10–April 2, 2006
This exhibition examines the important interiors, furniture, graphics, fashion, and illustration produced in New York between 1974 and 1984, a period in which downtown New York artists, musicians, playwrights, and designers created some of the most avant-garde work produced in America during the last century. In conjunction with New York University's Grey Art Gallery exhibition, *The Downtown Show: The New York Art Scene 1974–1984*. At Parsons, The New School for Design. Call 212/229-8919 or visit www.parsons.edu.

Ongoing Exhibitions

Mies
Miami
July 11–September 30, 2005
A photo exhibition by photographer Paul Clemence celebrating the work of Mies van der Rohe. The photographs zero in on the architectural details of some of Mies's masterpieces, like the Farnsworth House, Crown Hall, and the

German Pavilion at Barcelona. At the Florida International University School of Architecture. Call 305/348-3181 or visit www.fiu.edu.

Vanishing Point
Columbus, Ohio
Through August 14, 2005
This exhibition features photographs, paintings, drawings, video, and mixed-media installations that explore the aesthetics of contemporary urban "nonspaces." These ubiquitous public realms—convenience stores, hotel lobbies, shopping malls, airport terminals, parking lots—are often considered anonymous, banal, or otherwise socially and culturally insignificant. Rather than objectively documenting these spaces, the artists in *Vanishing Point* interpret them by focusing on their experiential and atmospheric qualities. At the Belmont Building, Wexner Center for the Arts. Call 614/292-0330 or visit www.wexarts.org.

2005 Young Architects Program Proposals
New York City
Through August 22, 2005
An installation of the proposed designs by the five 2005 Young Architects Program finalists: the winner, Xefirotarch (Los Angeles), and finalists Aranda/Lasch (New York), Forsythe + MacAllen Design (Vancouver, B.C.), Graftworks (New York), and WW (Boston). In the Louise Reinhardt Smith Gallery at the Museum of Modern Art. Call 212/708-9400 or visit www.moma.org.

Designed for Living: The Modern Interior
Chicago
Through August 27, 2005
The concept of modernity used as a marketing device began in the early 20th century. Design drawings by G.M. Niedecken and two Modern masters, Alfonso Iannelli and Henry P. Glass, are featured in this exhibition. At the Architech Gallery of Architectural Art. Call 312/475-1290 or visit www.architechgallery.com.

Claesson Koivisto Rune—The Models
Stockholm
Through September 4, 2005
An internationally recognized design and architecture practice, Claesson Koivisto Rune was formed in 1995. A large number of models, representing 85 different projects ranging from rough mock-ups to presentation models and finished prototypes, will be on view. At the Arkitekturmuseet. Call 46(0)8/587-27000 or visit www.arkitekturmuseet.se.

Scents of Purpose: Artists Interpret the Spice Box
San Francisco
Through September 5, 2005
More than 80 leading local and national artists and architects were invited to creatively explore the meaning and form of the traditional Jewish spice box (or *besamin*) used in the Sabbath prayer service. Participants in this art exhibition include renowned architects Daniel Libeskind, Chong Partners Architecture in association with Berkeley Mills & Earth Resources, Robert A.M. Stern, C. David Robinson, and Brad Cloepfil of Allied Works Architecture. At the Contemporary Jewish Museum. Call 415/334-8800 or visit www.cjm.org.

The Arts and Crafts Movement in Europe and America, 1880–1920: Design for the Modern World
Milwaukee
Through September 5, 2005
The exhibition showcases more than 300 Arts and Crafts objects from the United States and throughout Europe—including furniture, ceramics, metalwork, textiles, and works on paper—borrowed from 75 institutions and private collections. At the Milwaukee Art Museum. Call 414/224-3200 or visit www.mam.org.

Design for Darkness: Design for the Visually Impaired
New York City
Through September 9, 2005
The project invited students of design throughout the Czech Republic and Slovakia to address the basic needs of the visually impaired and to develop new models or adapted objects for their daily life. On view at the Czech Center. Call 212/288-0830 or visit www.czechcenter.com.

Policy and Design for Housing Beyond the Minimum: Lessons of the Urban Development Corporation 1968–1975
New York City
Through September 10, 2005
In response to the lack of housing units being built for families with limited income, a concerned group of architects, planners, policy

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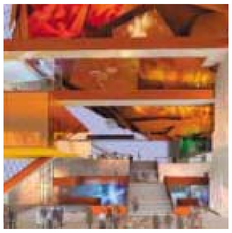
makers, public advocates, and environmental psychologists will take a look at the situation by presenting an evaluation of the housing produced by the New York State Urban Development Corporation. The exhibition will use plans and photographs of a sample of projects around New York State that demonstrate housing of differing conditions: urban and suburban; mixed income; high-rise and low-rise; various densities; and various building materials and technologies. At the Center for Architecture. Visit www.udchousing.org or www.aiany.org.

The Architect Jean Nouvel Meets Louisiana
Humblebaek, Denmark
Through September 18, 2005
Jean Nouvel is one of the most famous members of the generation that has been called the New Wave of French architects, all of whom participated in “Les Grands Projets” in Paris during the Mitterrand era. Jean Nouvel’s self-curated exhibition aims to demonstrate his fundamental architectural principle—the strong dialogue with the spirit and specific character of a place that forms the point of departure for every Nouvel project. At the Museum of Modern Art. Call 45/4919-0719 or visit www.louisiana.dk.



Filigree Spaces: Textile Installations by Piper Shepard
Baltimore
Through September 18, 2005
The two new installations, featuring a dramatic curtain wall in the Baltimore Museum of Art’s lobby and a “room within a room” design in the museum’s textile gallery, explore the connection between textiles and architecture. At the Baltimore Museum of Art. Call 410/396-7100 or visit www.artbma.org.

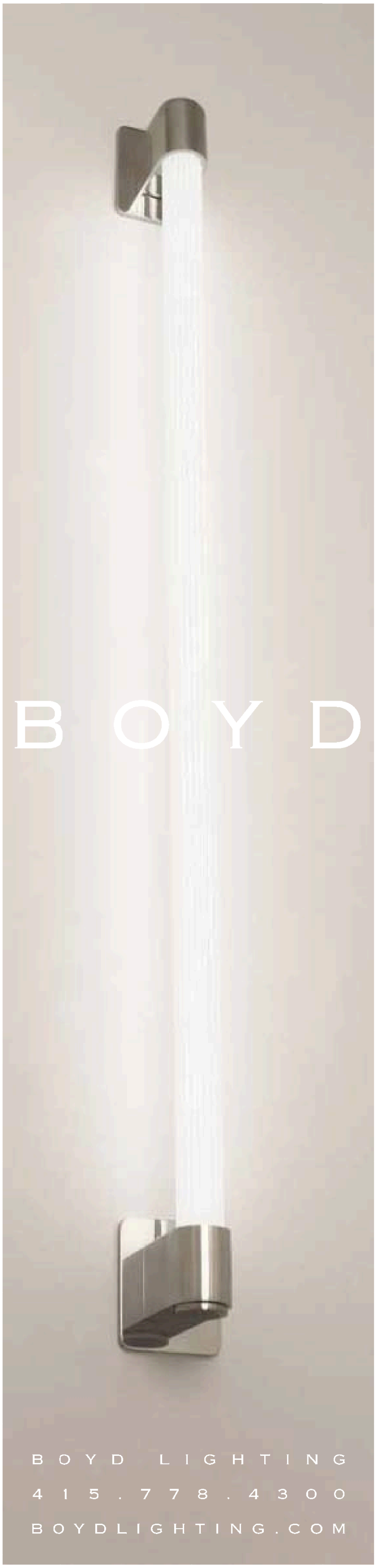
Romantic Modernist: The Life and Work of Norman Jaffe, Architect
Southampton, N.Y.
Through September 18, 2005
Norman Jaffe built over 600 projects during his 35-year career. He received numerable architecture awards and also participated in national and international exhibitions at leading institutions, including the Museum of Modern Art, New York. Eastern Long Island is where Jaffe found his place in American architecture, creating unique vacation homes while exploring his love of light and form. This is the first major exhibition to examine the life and work of this important American architect. At the Parrish Art Museum. Call 631/283-2118 or visit www.parrishart.org.

Restoration: The Dissolution of Ideologies
Stockholm
Through September 25, 2005
Restoration doctrines have succeeded one another ever since the start of the 19th century. In recent years, one finds a tendency to fit the approach to the object of restoration rather than following a specific doctrine. If there is an ideology of restoration today, what does it look like? This exhibition presents 10 important restorations completed recently. At the Arkitekturmuseet. Call 46(0)8/587-27000 or visit www.arkitekturmuseet.se.

a_show Stage 2: Austrian Architecture in the 20th and 21st Centuries
Vienna
Through September 2005
Due to the sheer scope of material covered by the exhibition, *a_show* is being subdivided into 10 themes to be opened successively in three stages. The first stage, covering the period 1850–1918, opened in March 2004 with much success. *Stage 2* extends to the period from 1919–58. At the Architekturzentrum Wien. Call 431/522-3115 or visit www.azw.at.

2005 Young Architects Program
Long Island City, Queens
Through September 2005
Los Angeles–based architecture firm Xefirotarch has been selected as the winner of the sixth annual MoMA/P.S. 1 Young Architects Program, a competition that invites emerging architects to propose a building project for the courtyard of P.S. 1 in Long Island City, Queens. Call 212/708-9400 or visit www.moma.org.

On Tour with Renzo Piano & Building Workshop: Selected Projects
Los Angeles
Through October 2. 2005
Featuring several seminal works, this exhibition shows an intimate view of the work of one of the most respected and visionary architects of our time. Piano’s involvement in each stage of a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building's development-from concept and master plan to construction and detailing-is chronicled. In the Ahmanson Building at the Los Angeles County Museum of Art (LACMA). Call 323/857-6000 or visit www.lacma.org.

Zero Gravity: The Art Institute, Renzo Piano, and Building for a New Century
Chicago
Through October 2, 2005
This exhibition presents delicate models, detailed renderings, and calligraphic sketches of the new north wing at the Art Institute of Chicago created by the architects of the Renzo Piano Building Workshop. In echoing Renzo Piano's commitment to the generous use of natural light in galleries, as well as to light architectural interventions in urban settings, the show is conceived to emphasize the lightness of the new north wing's design, with materials on display illuminated from a skylight. At the Art Institute of Chicago, in the airy, evocative setting around the balcony in Gallery 200. Call 312/443-3600 or visit www.artic.edu.

Transformed: Uncommon Uses of Materials in Contemporary Design
Philadelphia
Through October 9, 2005
With a focus on both form and function, this exhibition comprises 19 contemporary design objects in the Philadelphia Museum of Art's collection, providing an illuminating look at what happens when today's designers fuse utilitarian objects with unconventional materials, such as silicon, recycled plastic, fibrated concrete, and even goose feathers. The exhibition includes pieces by Ingo Maurer, Frank O. Gehry, Tokujin Yoshioka, and Fernando and Humberto Campana, among others. At the Philadelphia Museum of Art. Call 215/763-8100 or visit www.philamuseum.org.

Tools of the Imagination
Washington, D.C.
Through October 10, 2005
This exhibition will show how various devices have revolutionized the way in which architects and designers imagine and create architecture. Included are 250 years of design tools and technologies—from historic pencils, ink, and drafting equipment to the latest and most sophisticated software and hardware, simulations, models, and lasers—as well as a wide array of drawings, renderings, and sketches from well-known architects. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Going, Going, Gone? Mid-Century Modern Architecture in South Florida
Fort Lauderdale, Fla.
Through October 30, 2005
Can we still save South Florida's Midcentury Modern architecture? This exhibition is a photographic journey through Broward and Miami-Dade counties featuring the work of photographer Robin Hill, who has shot dozens of outstanding South Florida structures dating back to the mid-20th century. At the Museum of Art. Call 954/525-5500 or visit www.moafl.org.

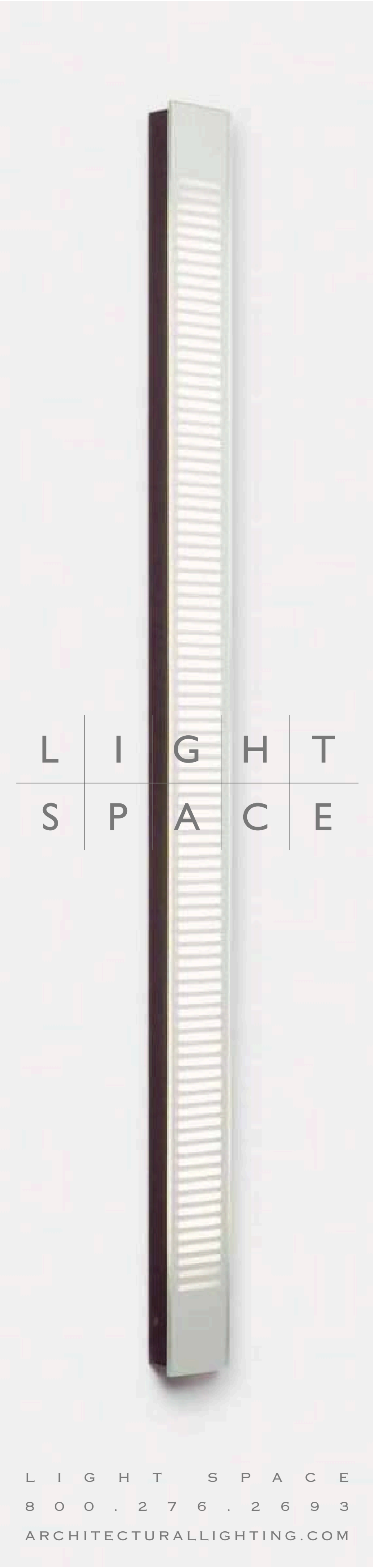
The High Line
New York City
Through October 31, 2005
This exhibition features Field Operations and Diller Scofidio + Renfro's winning entry for the redesign of the High Line, a defunct, elevated railway bed that runs along Manhattan's far West Side. In the Architecture and Design Gallery at the Museum of Modern Art (MoMA). Call 212/708-9400 or visit www.moma.org.

Lectures, Conferences, and Symposia

Lecture: East End Dream House
Southampton, N.Y.
August 5, 2005
This talk with Alicia Longwell, Lewis B. and Dorothy Cullman chief curator, art and education, at the Parish Museum, will trace the history of domestic architecture in the Hamptons, focusing on the rise of the Hamptons beach house in the postwar period and the social and cultural trends that shaped this phenomenon. At the Parrish Museum. Call 631/283-2118 or visit www.parrishart.org.

Reel Architecture Film Series
Washington, D.C.
Wednesdays through August 24, 2005
These screenings showcase American films that reflect themes related to the National Building Museum's 25 years of exhibitions. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

A Touch of Cass: Ramsey Hill Historic House Tour
Saint Paul, Minn.
September 11, 2005
The 2005 tour will focus on homes designed by



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GlassBuild America
Atlanta
September 13–15, 2005
The Glass, Window, and Door Expo will be held at the Georgia World Congress Center. For further information, visit www.glassbuild.com

Prague: 20th-Century Architecture in Transition
Prague
September 17–23, 2005
The AIA Committee of Design conference will explore design of buildings, sites, and the city in relation to political, social, cultural, and economic transitions and the permanence of the historic, climatic, and geographic environment. At the Hotel Alcron. Visit www.aia.org.

2005 AIA New York Chapter Design Awards Public Symposium
New York City
September 19, 2005
A moderated discussion and presentation of outstanding architecture, interior architecture, and unbuilt projects located in New York City or designed by New York architects. At the Center for Architecture. Call 212/358-6117 or visit www.aiany.org.

Internship Conference: Designing Tomorrow's Architect
San Antonio
September 22–24, 2005
Seventy-five invited participants will include key leadership from each organization and a diverse group of stakeholders in the internship process. Cosponsored by the AIA and NCARB, the conference will be held at the historic Empire Theatre. For more information, visit www.designingtomorrowsarchitect.org.

100% Design
London
September 22–25, 2005
The internationally renowned commercial contemporary design exhibition promises an exciting lineup of established manufacturers and designers as well as first time exhibitors and upcoming design talent. At Earls Court 2. For information, visit www.100percentdesign.co.uk.

Design for Change: A Symposium on Design, Social Responsibility, and Nonprofit Organizations
New York City
September 23, 2005
This symposium will bring together design educators and practitioners and nonprofit administrators to discuss the role of design in addressing larger social issues. The day-long program will include panel discussions, presentations of case studies, and opportunities for informal dialogue. At Parsons The New School for Design. Call 212/229-8919 or visit www.parsons.edu.

ArtHouses: New Directions in Museum and Exhibition Design
Houston
September 28–October 26, 2005
A lecture series presented by the Rice Design Alliance. A new generation of architects has emerged to imaginatively address the challenges of designing for art of our time. Lecturers include Brad Cloepfil of Allied Works Architecture, Tony Fretton of Tony Fretton Architects, Galia Solomonoff of OpenOffice: art + architecture collaboration, and David Adjaye of Adjaye/Associates. In Brown Auditorium at the Museum of Fine Arts. Call 713/348-4876 or visit www.rda.rice.edu.

Architecture River Tours
Chicago
Through October 2, 2005
See more than 50 historic and architecturally significant buildings with trained volunteer docents who are Chicago architecture enthusiasts. For tour information, call 312/922-3432 or visit www.architecture.org.

Conrad Buff III and Donald Hensman Home Tour
Pasadena, Calif.
October 11, 14, and 15, 2005
"A Celebration of the Work of Architects Conrad Buff III and Donald Hensman" is a three-day event featuring a home tour, symposium, and reception. Buff and Hensman helped define the ultra cool and casual California Modern architecture scene of the 1950 and '60s. The tour will consist of six Buff and Hensman homes in the Pasadena, Altadena, and Linda Vista areas, some of which have been unavailable to the public until now. For information, call 626/793-3334.

Competitions

Juried Photo Exhibits at Build Boston

Deadline: August 1, 2005

All New England architects, landscape architects, and interior designers who are members of the AIA, ASID, ASLA, or IIDA are eligible. Visit www.architects.org/awards.

Honor Awards for Design Excellence

Deadline: August 4, 2005

Any built project of any type anywhere in the world by any Massachusetts architect is eligible, and any architect anywhere in the world may submit any project built in Massachusetts. Visit www.architects.org/awards.

Boston Foundation for Architecture: Grants for Public Education Programs

Deadline: August 10, 2005

An invitation to educators, community groups, and creative individuals to submit grant proposals for public-education programs in Massachusetts related to planning, design, and the built environment. For more information call 617/951-1433 or visit www.bfagrants.org.

The 22nd Antron Fiber Design Award

Deadline: September 16, 2005

This award program recognizes designers who are setting new standards in commercial design through the innovative use of carpet. Visit www.antron.invista.com/designawards.

Windscape: An Ideas Competition Envisioning Renewable Energy for Cape Cod

Deadline: September 30, 2005

The competition challenges participants to explore the notion of renewable energy and to better understand the environmental, visual, and other implications of the infrastructure of a wind farm. For further information, visit www.architects.org/windscape.

2005 NSA Sunroom Design Awards Competition

Deadline: October 31, 2005

Judged in three cost levels as well as type of roof category, the National Sunroom Association (NSA) Design Awards Competition recognizes excellence in design and installation of sunrooms. For more information, visit www.nationalsunroom.org.

2005 Source Awards

Deadline: December 2, 2005

This national lighting design competition, which focuses on furthering the understanding and function of lighting as a primary element in design, is open to all lighting designers, architects, engineers, interior and professional designers, and consultants who use Cooper Lighting fixtures in interior or exterior design projects. Visit www.cooperlighting.com.

E-mail event and competition information two months before event or submission deadline to elisabeth_broome@mcgraw-hill.com. Edited by Alexandra Gates.

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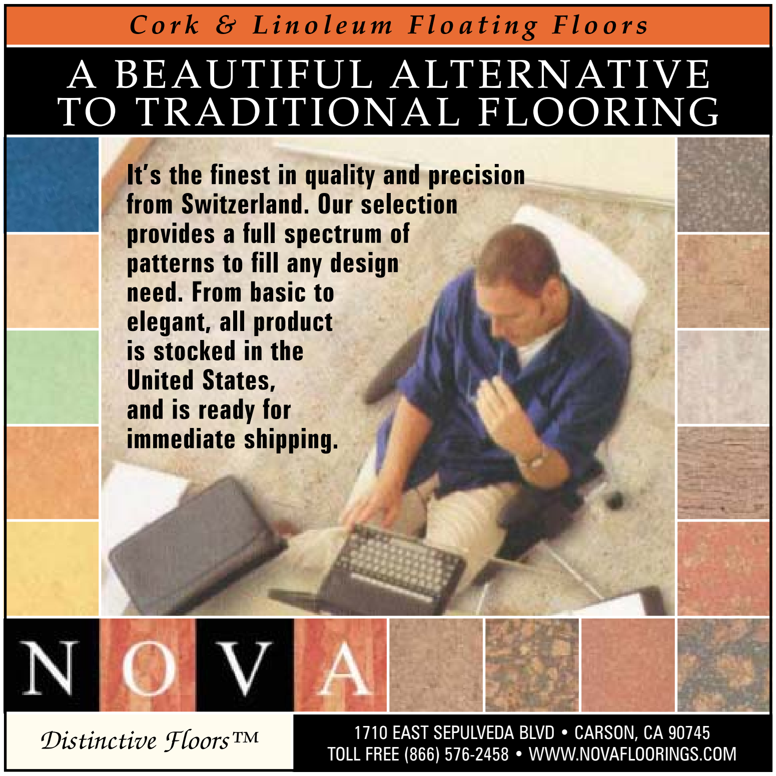
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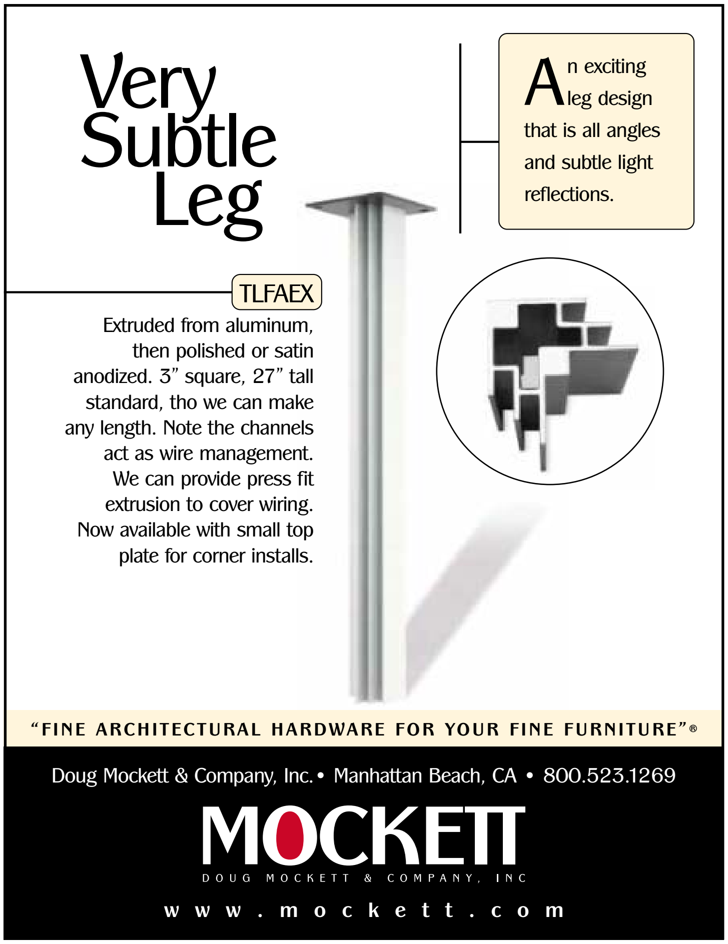
Material resources used: Article: This article addresses issues concerning health and safety.

I hereby certify that the above information is true and accurate to the best of my knowledge and that I have complied with the AIA Continuing Education Guidelines for the reported period.

Signature **Date**


Very Subtle Leg

An exciting leg design that is all angles and subtle light reflections.

TLFAEX

Extruded from aluminum, then polished or satin anodized. 3" square, 27" tall standard, tho we can make any length. Note the channels act as wire management. We can provide press fit extrusion to cover wiring. Now available with small top plate for corner installs.

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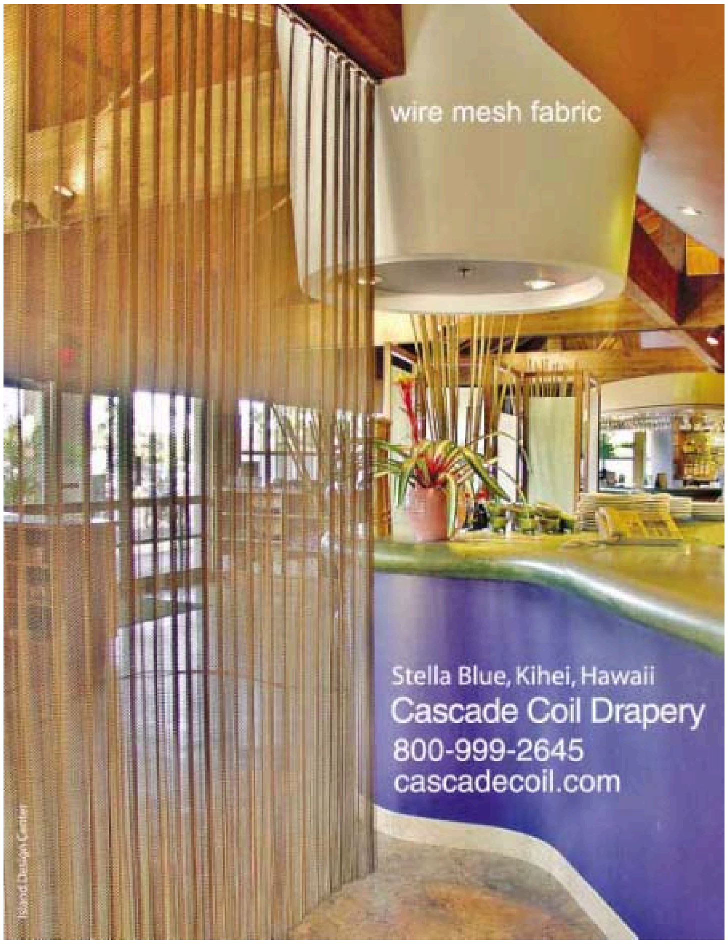
wire mesh fabric

Stella Blue, Kihei, Hawaii
Cascade Coil Drapery
800-999-2645
cascadecoil.com

Island Design Center

Trespa Meteon®: The Head of Its Class.

Project Architect: Legat Architects,
Construction Manager: Gilbane Building Company
© Paul Rivera/archphoto 2004

Erik Andersen, Architect
HOK Chicago
"Meteon is everything an architect wants—environmentally friendly, durable, economical and aesthetically expressive with a wide selection."

David Buckley, Specifier
HOK St. Louis
"Trespa Meteon is a really attractive solution that meets sustainability criteria that many projects require."

Trespa Meteon® is an especially appropriate building material for learning facilities because years of research, expertise and knowledge went into its development. The result is a truly state-of-the-art exterior facade. Meteon was specified to give William Rainey Harper College in Palatine, IL a "high-design" look that's weather resistant, colorfast, impact resistant and easy to clean—even with organic cleaners and detergents. Meteon is also ideal for fascias, sandwich panels, storefronts, soffits, balconies and balustrades and is available in a wide range of colors, textures and patterns.

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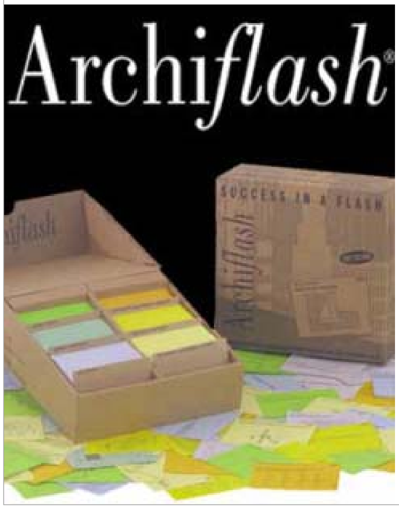
1 General data



Nalsa

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| Circle Reader Service #150

Crystallized Glass Ceramic Architectural Panels

4 Masonry

Technical Glass Products

Neopariés® and Neopariés® LT are lighter yet stronger than granite. Commonly used for cladding interior and exterior walls, flooring, and counter or tabletops, they are virtually impermeable and not subject to freeze-thaw damage, penetration by rust, mortar or other staining substances. Contact Technical Glass Products at 888-397-3473 or www.fireglass.com.

888-397-3473
www.fireglass.com

| Circle Reader Service #153

Gate Operators

2 Site construction

FAAC International, Inc.

FAAC is the world's largest specialized manufacturer of automated operators for swing, slide, and barrier gate systems. FAAC hydraulic operators meet or exceed strict European safety requirements as well as UL325 and CSA standards in North America. FAAC received ISO-9001 certification in 1996. Swing gate operators for residential and commercial applications include on-gate and in-ground versions that are famous for being small, but powerful. Barrier gates versions include a high-speed model (.8 sec.) for freeway use and a special model designed for heavy traffic wide entrances that require long beams (up to 23-ft.).

800-221-8278
www.faacusa.com

| Circle Reader Service #151

Pre-Engineered Railings

5 Metals

Handrail Design Inc.

inox™ Stainless Railing System: Manufactured of corrosion-resistant stainless steel, inox is ideal for interior or exterior applications in commercial and residential facilities. Infill materials are available in perforated stainless steel, tempered glass, and stainless steel rods. Handrails are available in wood/stainless, stainless, or colored nylon. Curved rails and custom designs are available. Complete supply and installation service are available throughout North America, which includes inox, CIRCUM™, HEWI® Nylon, and d line™ railings. Email info@hdirailings.com

717-285-4088
www.hdirailings.com

| Circle Reader Service #154

Commercial Grade Outdoor Furniture

2 Site construction

Modern Outdoor

High style, clean-lined simplicity, short lead times, environmentally conscious materials—these are the attributes of Modern Outdoor—a producer of top quality outdoor furniture with a definitive modern aesthetic. The Modern Outdoor Collections are commercial grade products designed for the restaurant, hospitality, and resort industries, with an aesthetic that is perfect for a residential client's backyard setting. The entirety of the Collection is made from Ipe, Electropolished Stainless Steel and Natural Composite materials. Modern Outdoor offers attractive pricing.

818-838-7060
www.modernoutdoor.com

| Circle Reader Service #152

Copper Finish

5 Metals

Linetec

Linetec offers a copper anodize finish that maintains its initial copper color and does not patina over time. Architects, owners, and residents no longer need to worry about the design complexities and maintenance issues when choosing the classic look of copper. Contact Linetec for more information or to request samples.

888-717-1472
www.lintec.com

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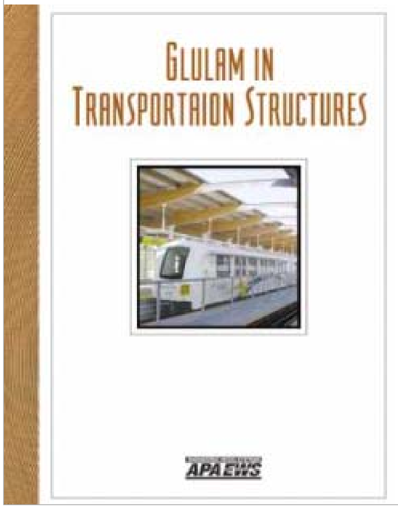
Versatile Wood Design

6 Wood & plastics



APA - The Engineered Wood Association

Around the world people are on the move, and the need for transportation infrastructure and facilities continues to grow. Architects challenged by these needs are turning to glued laminated timbers and other engineered wood products. This new publication from APA - The Engineered Wood Association, includes profiles of seven transit facilities with key comments from the designers, contractors and facility operators. The facilities range from a ferry terminal in Alaska to the new airport terminal in Victoria, B.C., and include train stations, bus terminals, and multi-modal facilities.

www.glulambeams.org

| Circle Reader Service #156

Tall Wall Systems

6 Wood & plastics

Trus Joist, A Weyerhaeuser Business

Trus Joist's tall wall system offers architects, designers and builders, walls 10- to 30-ft. in height, allowing spacious, open floor plans. The design of a tall wall system using TimberStrand® LSL and Parallam® PSL technologies provides a wall that will start straight, stay straight and deliver predictable performance. Visit Trus Joist, A Weyerhaeuser Business at www.trusjoist.com or call 800-338-0515.

800-338-0515
www.trusjoist.com

| Circle Reader Service #159

Architectural Columns, Balustrades & Mouldings

6 Wood & plastics

Melton Classics, Inc.

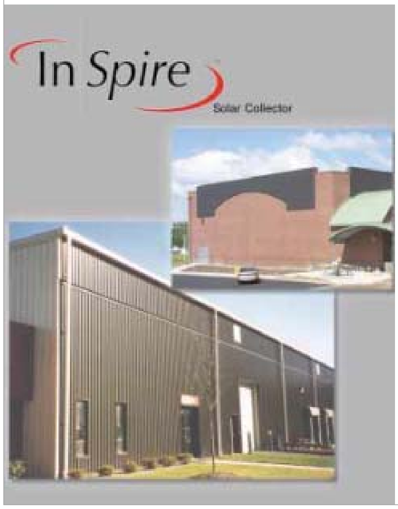
Melton Classics provides the design professional with the most comprehensive selection of quality architectural products in the industry, including architectural columns, balustrades, mouldings, cornices, and a wide array of architectural elements. Architectural columns are available plain or fluted, load-bearing or column covers, round or square in fiberglass, fiberglass/marble composite, synthetic stone, cast stone, GFRC, and wood for paint or stain. Melton Classics offers a maintenance-free balustrade product ideal for any application.

800-963-3060
www.meltonclassics.com

| Circle Reader Service #157

Metal Wall Cladding

7 Thermal & moisture protection



ATAS International, Inc.

ATAS International Inc. introduces the INSPIRE Wall System, a new metal wall cladding made from .032 aluminum with tiny perforations in a heat absorbing surface. The premium finish is available in sixteen standard colors. Mounted a few inches from the main wall, on preferably a southern exposure, fresh air is drawn through the perforations and directed into the building with a fan and duct system. Air space between the walls also acts as an insulator. INSPIRE Wall is environmentally friendly, because it uses clean, natural energy.

800-468-1441
www.atas.com

| Circle Reader Service #160

Colorful Laminates

6 Wood & plastics

Nevamar Company, LLC

Introducing a colorful new palette filled with the latest laminates from Nevamar. Six exotic woodgrains complete one of the most unusual and exciting collections, while six expressive patterns will jumpstart dozens of innovative design ideas. Of course, they're all protected by their exclusive Armored Protection™ Surface for long, beautiful life. Visit www.nevamar.com or call 800-638-4380.

800-638-4380
www.nevamar.com

| Circle Reader Service #158

Crimp-Curved Roof, Wall & Decking Panels

7 Thermal & moisture protection

Curveline

Curveline can crimp-curve metal panels in a range of profiles, substrates and finishes for structural or decorative use. Applications: roofs, walls, standard and acoustical decking, canopies, fascias, mansards, etc. Specifiers may source panels from manufacturers in 100+ factory locations and select the desired curving parameters, including simple, complex and multi-radius curves.

www.met-tile.com/curveline

| Circle Reader Service #161

Metal Building Components

7 Thermal & moisture protection

Metal Sales Manufacturing Corporation

With 19 branches throughout the United States, Metal Sales Manufacturing Corporation is one of the building industry's premier providers of metal building components. They produce metal roofing, siding panels, and accessories for agricultural, commercial, architectural, industrial, and residential building projects of every shape and size—new construction or retro-fit. Metal Sales has a 40-year history of providing cutting-edge products, impeccable service from highly trained professionals, and the largest sales force in the industry.

800-406-7387
www.metalsales.us.com

| Circle Reader Service #162

Architectural Glass

8 Doors & windows

General Glass International

Bubbles is one of the new and exciting patterns from General Glass. Produced in 1/4-in. and 3/8-in. thicknesses, it is ideal for shower doors, partitions and other architectural applications. Bubbles is easily fabricated to meet your project needs. General Glass International offers a wide selectionof pattern glass available from their extensive inventory. They offer domestic and imported patterns that range from traditional to contemporary. Their extensive selection includes many heavy patterns in 3/8-in. thickness as well as unique acid etched designs. These products are available locally from select fabricators nationwide.

800-431-2042
www.generalglass.com

| Circle Reader Service #165

Roof Penetration Flashings

7 Thermal & moisture protection

SBC Industries

SBC Industries has a complete line of easy-to-install roof penetration flashings that replace pitch pans known to require maintenance and commonly cause roof failure. They are approved and endorsed for use in warranted roofs by many system manufacturers. These stainless steel flashings, compatible with most materials, are the answer to problems with flashing of angle irons, I and H beams, pipes, square tubing, channels, conduits, coaxial and lightning cables, and struts. In a split or a slipover design. Shown is the VTR with Vandal proof cap and Lightning Cable Flashing.

800-228-2580
www.sbcflashings.com

| Circle Reader Service #163

Special Purpose Doors & Windows

8 Doors & windows

Krieger Specialty Products Co.

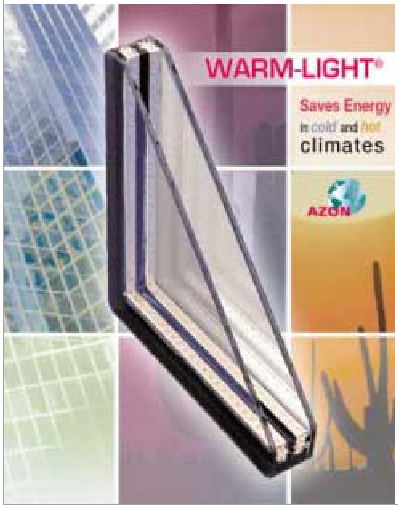
For over 60 years, Krieger has been custom manufacturing acoustical, blast, bullet, security, radio frequency shielding, thermal shielding, stainless steel, and other special purpose doors and windows. Their custom designed and manufactured doors and windows are utilized by leading architects in premier installations such as the Kodak Theater, Disney Concert Hall, Hollywood Bowl, Max Fisher Performing Center, Boeing Integration Center, The Getty Museum, L.A. Zoo, Basketball Hall of Fame, the Pentagon, and various other U.S. government, military, and embassy buildings throughout the world.

www.KriegerProducts.com

| Circle Reader Service #166

Extreme Performance Commercial Insulated Glass

8 Doors & windows



AZON USA Inc.

Warm-Light® spacer from Azon creates a warm-edge glass unit that reduces thermal conductivity in any climatic condition. The result is a dramatic reduction in condensation on the glass surface in cool climates and less heat transfer in warm climates, as well as lower utility costs and a more comfortable interior environment. The polyurethane core in Warm-Light spacer is 100 times less conductive than stainless steel or conventional aluminum spacer. Also enables design flexibility for a variety of building types, window sizes and styles, with standard and custom colors.

800-788-5942
www.warmedge.com

| Circle Reader Service #164

Window Covering Treatments

8 Doors & windows

MechoShade Systems, Inc.

With over 30 years experience, MechoShade® is one of the leading single-source manufacturers of complete integrated solar shading systems, controls and daylighting solutions. They offer a wide variety of control solutions for commercial and residential applications. From simple line voltage switches to networked, addressable, building-wide controls, MechoShade offers a variety of solutions including integration into 3rd party Lighting, BMS and A/V Systems. With over 100 visually transparent shade cloths in various weaves, densities and colors, they can meet any performance or design requirement.

718-729-2020
www.mechoshade.com

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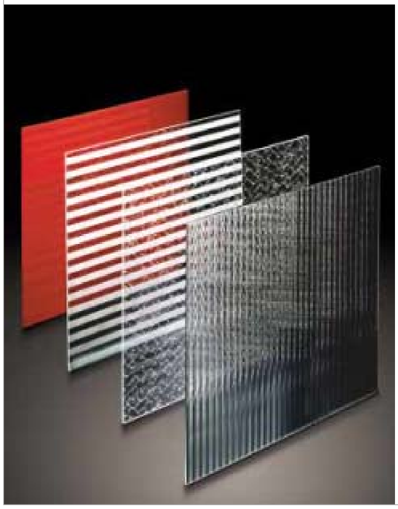
Visual Effects Glass

8 Doors & windows



Oldcastle Glass®

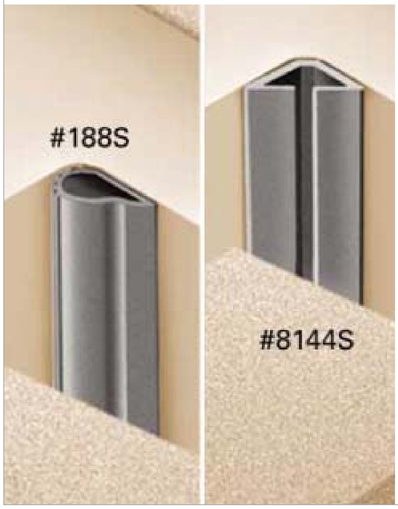
Montage™ Visual Effects Glass by Oldcastle Glass® is a totally new concept in glazing. Montage™ provides architects and designers the ability to create unique custom effects by combining a wide variety of standard designs and technologies. Montage™ allows you to mix and match textured patterned glass, custom colored coatings, designer silk-screened patterns, even unique rice paper designs into your very own vision.

866-653-2278
www.oldcastleglass.com

| Circle Reader Service #168

Edge Seals for Category B Fire Doors

8 Doors & windows



Zero International, Inc.

Zero International's #188S compression seal and #8144S gasket are UL-approved for use as Category G edge sealing systems and as Category H smoke and draft control gasketing for 20-min. Category B fire doors. These silicone systems are surface-applied with pressure-sensitive adhesive and eliminate the need for intumescence in the door assembly. Category G and Category H are testing-agency classifications used to standardize the testing and labeling of doors and gasketing under positive-pressure code requirements for fire-rating and smoke control, respectively.

www.zerointernational.com

| Circle Reader Service #171

Electronically Tintable Glass

8 Doors & windows

the power to change
At your fingertips, glass that tints to control the sun. Stop solar heat gain and eliminate glare without ever losing your view.
SageGlass

SAGE Electrochromics, Inc.

In the making for over a decade; durable, tested glass that tints at the push of a button. SageGlass® electronically tintable glazing eliminates having to choose between a design that maximizes the positive attributes of the sun—daylight, view, connection to the outdoors—and one that attempts to minimize its drawbacks—heat gain, glare, and fading. You get unprecedented solar control without the need for blinds, so the view and your design intent are preserved.

877-724-3321
www.sage-ec.com

| Circle Reader Service #169

Resilient Athletic Flooring

9 Finishes

Abacus Sports Installations

Abacus Sports Installations is proud to offer PADENPOR. PADENPOR resilient flooring is designed for multipurpose use, including all sports activities, dances, meetings, roller blading, etc. PADENPOR is a "dual durometer" multi-purpose floor. Two products (rubber base-mat and urethane) are combined to introduce two different hardnesses to the floor. The rubber underlayment (LEED and Green certified) is soft, offering resilience/ergonomics/safety. The urethanes are hard, offering not only performance (ball rebound/playability) but also durability.

800-821-4557
www.abacussports.com

| Circle Reader Service #172

Wood Interior Windows & Doors

8 Doors & windows

Weather Shield Windows & Doors

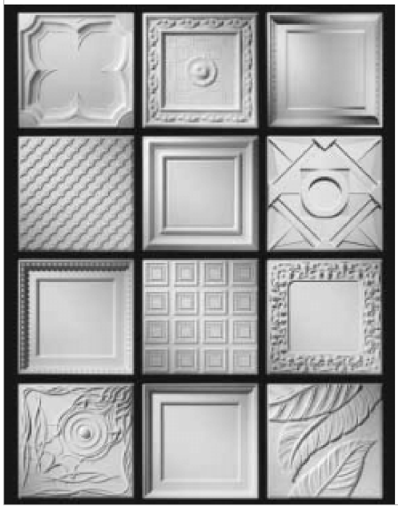
Engineered with unique features and built for unparalleled performance, the Weather Shield Legacy Series is simply one of the best window and door lines available for custom and luxury homes. Available in tilt double-hung, casement, awning, and direct-set windows and French doors, the premium windows feature elegant wood interiors in a variety of wood species from Weather Shield's Custom Wood Interiors Collection™.

800-477-6808
www.weathershield.com

| Circle Reader Service #170

Ornamental Plaster Ceiling Tiles

9 Finishes



Above View Mfg, By Tiles, Inc.

ABOVE VIEW ornamental plaster ceiling tiles are fabricated from a non-toxic, non-combustible, proprietary composition. They drop into any standard 15/16-in. T-Bar grid system. There are more than 50 standard designs, custom design work, and 1300 custom colors and faux finishes available upon request.

414-744-7118
www.aboveview.com

| Circle Reader Service #173

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Ceiling Accent

9 Finishes

Architectural Products by Outwater, LLC

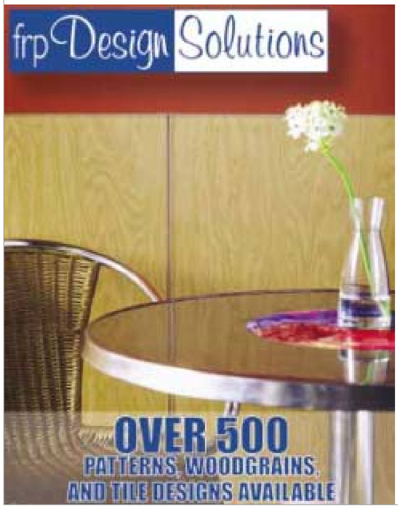
Architectural Products by Outwater offers Ceiling Focus, the most dramatic accent available for any large or high ceiling. Suited for residential and commercial use in new construction or renovation applications, Ceiling Focus can be used "right out of the box," or can be easily adapted for use with chandeliers or other lighting fixtures by merely drilling through its center. Produced of lightweight, extremely durable high-density polyurethane, Ceiling Focus comes factory primed, and is ready to be painted, glazed or faux finished the same day as installation. Ceiling Focus is available in two sizes.

800-835-4400
www.outwater.com

| Circle Reader Service #174

Decorative Wall Panels

9 Finishes



Kemlite Company

frpDesign Solutions is a family of decorative wall panels that provides an alternative to traditional wall coverings such as ceramic tile, wood paneling or vinyl wall coverings. Offering both functionality and design, products in the frpDesign Solutions line are made of a moisture-resistant frp panel with a decorative finish that includes myriad colors, patterns, and woodgrains, as well as a tile-look panel. Available with over 500 hundred choices, frpDesign Solutions is easy to install and maintain. For more information, visit Kemlite on the web.

888-332-6377
www.frpdesignsolutions.com

| Circle Reader Service #177

Sustainable Ceiling Panels

9 Finishes

Chicago Metallic

EuroStone™ sustainable ceiling panels deliver environmental performance, long-term value and classic styling. Made of lightweight, inorganic perlite which does not support mold growth. Class A fire rating. Exceptional acoustical performance and light reflectance. Ideal for schools, healthcare, offices and harsh, humid environments. Options: pattern selection, square and reveal edge.

800-323-7164
www.chicagometallic.com/eurostone

| Circle Reader Service #175

Noise Barrier Systems

9 Finishes

Quilite® International

QUILITE® is designed to effectively reduce noise and maintain light transparency. Corrugated on both sides, their panels merge noise-cutting performance with light-transmitting aesthetics. Laboratory and field tests rate QUILITE®'s noise reduction 60-80% and light transmission 80%. Designed by aerospace engineers, QUILITE®'s technology is applicable to a variety of venues, large and small, public and private.

310-641-7701
www.quilite.com

| Circle Reader Service #178

Cast Metal Wall Surfacing Material

9 Finishes

Gage

Gagecast® is a cast metal wall surfacing material suitable for a variety of interior architectural applications where patterns that feature high luster, relief, durability, and cost effective installation are a requirement. Twenty-eight designs are standard, however, custom collaboration is encouraged. Gagecast® is one component of Gage Vertical Surfacing. Contact the factory for product literature and selected samples.

www.gageverticalsurfacing.com

| Circle Reader Service #176

Stackable Trim Molding System

9 Finishes

Roppe Corporation

Roppe BaseMates™ is a patent-pending stackable trim molding system made of a PVC free, 100% rubber compound. A new option in resilient custom molding finishes, BaseMates is available in four 1-1/8-in. shoe mold profiles and four 3/4-in. and seven 1-3/4-in. profile top trims. BaseMates can be used with any existing 1/8-in. or .080-in. wall base to create a distinctive look while extending the life of the base. BaseMates, manufactured with 10% natural rubber, can contribute to the LEED® Green Building Certification System.

800-537-9527
www.roppe.com

| Circle Reader Service #179

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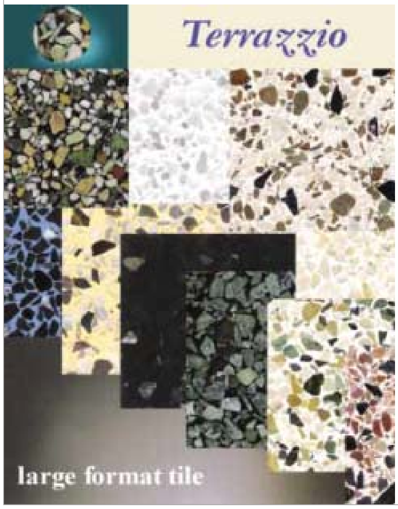
Authentic Terrazzo

9 Finishes



Surface Elements

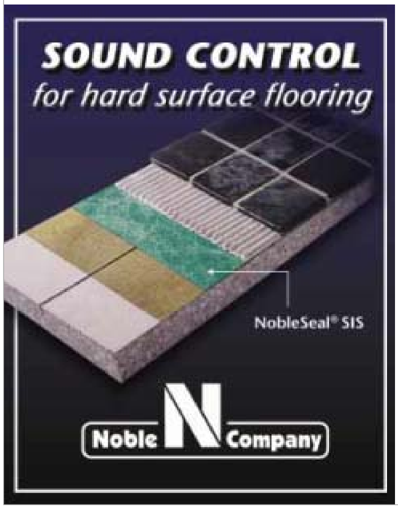
Terrazzio is an Authentic Terrazzo used for floors, counter tops and as an exterior wall panel. Terrazzio is first manufactured as a 4-ft. by 8-ft. by 1/4-in. bisque then polished and cut to your specifications. With twelve 'time tested' traditional colors, and twenty-two vibrant contemporary colors, Terrazzio has the beauty and durability of traditional terrazzo with today's warm tones and refreshing colors. Terrazzio is ideal for schools, dazzling 'up scale' restaurants and retail stores.

931-845-3434
www.Terrazzio.com

| Circle Reader Service #180

Reduce Impact Noise

9 Finishes



The Noble Company

NobleSeal® SIS is a sheet membrane that reduces the impact noise produced by hard surface flooring (like tile and hardwood floors). SIS is only 3/64-in.-thick so it minimizes problems with transitions and the need to alter door and cabinet heights. It is effective at reducing noise (IIC=62; STC=59). SIS can be installed over all common substrates, even gypsum concrete and radiant heating systems. SIS can also protect thin-set tile from cracking and provide waterproofing. Visit their Web site. Email richard@noblecompany.com

800-878-5788
www.noblecompany.com

| Circle Reader Service #181

Porcelain Floor Tiles

9 Finishes

Viva Ceramica

VIVA LIMITED EDITION is a new collection of floor coverings with exclusive distribution. The collection includes MAXI floor tiles: 12mm glazed, color-through, very large sized porcelain tile with graphics reminiscent of wood.

www.cerviva.it

| Circle Reader Service #182

Vertical Blade Louver

10 Specialties

Airolite

The Airolite Company is expanding its Storm Class™ wind-driven rain louver line to include a new product with superior resistance to water penetration under wind-driven rain conditions. New AIROLITE Louver Type SCV4 is a 4-in.-deep, vertical, stationary blade louver rated under AMCA Standard 500-L 99, Wind Driven Rain Water Penetration Test, and expands Airolite's existing Storm Class™ product range which now includes 2-, 4-, 5-, 6-, 7- and 8-in.-deep louvers. For more than 85 years, Airolite has served as an innovative leader in the design and manufacture of architectural louvers, grilles, screens and sun controls.

740-373-7676
www.airolite.com

| Circle Reader Service #183

Reinforced Welded Lockers

10 Specialties

ProTough™
PENCO

Penco Products, Inc.

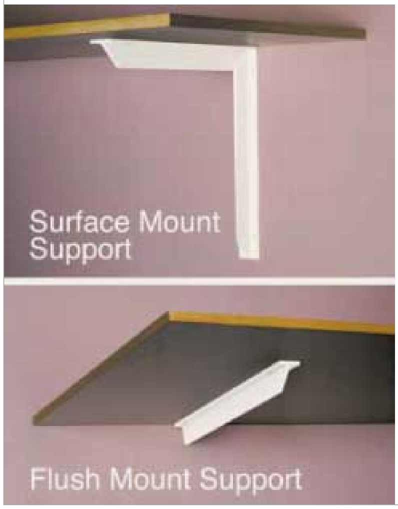
ProTough™ welded lockers from Penco are designed for superior durability. Each vertical and front to back junction of the locker is reinforced by 3/4-in. 18-ga. square steel tubing to provide extra protection, like the roll cage of a race car. ProTough lockers are ideal for athletic applications where a more robust construction may be needed to withstand vigorous use. Double pan doors and cremone handles are available.

800-562-1000
www.pencoproducts.com

| Circle Reader Service #184

Counter Support Brackets

10 Specialties



Rangine Corporation / Rakks

Rangine Corporation's counter support brackets provide an easy-to-install alternative to full-height laminated panels. Available in a range of sizes to support counters up to 30-in.-deep, brackets install easily into studs or blocking and can support loads up to 450-lb. Less expensive than laminated supports, they increase open space while improving handicapped access and ergonomics. Brackets can be ordered in either surface or flush mounted configurations to provide heavy-duty unobtrusive support. Manufactured of extruded structural aluminum.

508-376-4545
www.rakks.com

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Dual-Sided Filing Cabinet

12 Furnishings

Aurora from Richards-Wilcox, Inc.

Aurora Products introduces the 2-Tier Times-2, a new twist on storage and filing. At only 29.5-in. high, the 2-Tier Times-2 is a perfect desk companion, providing dual-sided filing in a locking cabinet that rotates. The Times-2 is small, but mighty: it holds as much as one 4-drawer 30-in. lateral file in a footprint that's just 36-in. wide by 25-in. deep. A variety of accessories accommodate all types of multimedia storage and filing. Use the 2-Tier for personal storage and filing, or between two work stations for shared filing. Email sniemiec@richardswilcox.com

800-877-8456
www.timestwo.com

| Circle Reader Service #186

Innovative Lighting

16 Electrical

Engineered Lighting Products

The "Hole In The Wall" goes small! The newest member of the "HITW" family has a 4-in. by 5-5/8-in. aperture opening. The durable GRG cast housing once installed becomes one with the wall appearing as a custom formed drywall 'light niche.' Available in either LED or low wattage incandescent light sources.

626-579-0943
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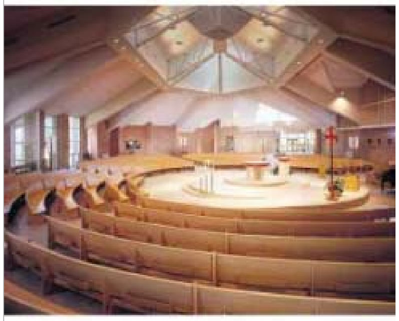

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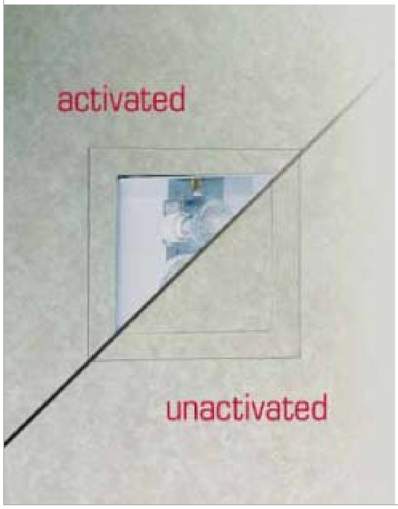

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CITY OF ONTARIO HOUSING AGENCY QUIET HOME PROGRAM REQUEST FOR STATEMENTS OF QUALIFICATIONS & REQUEST FOR PROPOSALS PROFESSIONAL ARCHITECTURAL, ENGINEERING AND ACOUSTICAL SERVICES FOR NEW RESIDENTIAL SOUND INSULATION PROJECT

Notice is hereby given that the Housing Agency of the City of Ontario, California, will receive no later than 4:30 p.m. on Wednesday, August 31, 2005, Request for Statements of Qualifications (RFQ) and Request for Proposals (RFP) for professional architectural, engineering and acoustical services for a new residential sound insulation project. The project will consist of soundproofing approximately 140 dwellings near Ontario International Airport. Included are single family detached homes, duplexes and multi-family structures. Typical improvements include the installation of acoustical windows and doors, attic insulation, central heating, ventilation and air conditioning systems, etc. The consultant's general scope of work consists of: conducting architectural surveys, preparing thorough building deficiencies assessment reports, preparation of construction cost estimates and bid documents, construction management, pre- and post-construction noise testing and reporting, etc. The estimated construction cost is about $3.5 million. Qualified consultants must be familiar with FAA, local and State of California standards and requirements for similar types of projects. The FAA and Los Angeles World Airports will fund the project. Because of a significant number of Spanish-speaking participants, it is essential that the selected consultant have staff members who are fluent in Spanish, assigned directly to the project. Each response must conform to the Agency's Request for RFQ/RFP document. Copies of the RFQ/RFP document may be obtained by fax request to the Ontario Housing Agency at (909) 395-2288 or by calling Jorge Villanueva at (909) 395-2302. Small, Minority and Women-owned businesses are encouraged to respond. City of Ontario, Housing Agency Quiet Home Program, Jorge L. Villanueva, Senior Project Coordinator, (909) 395-2302

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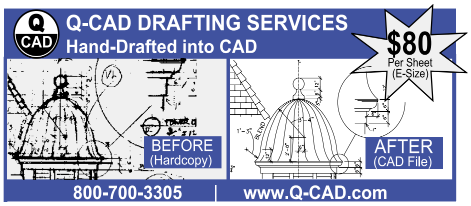
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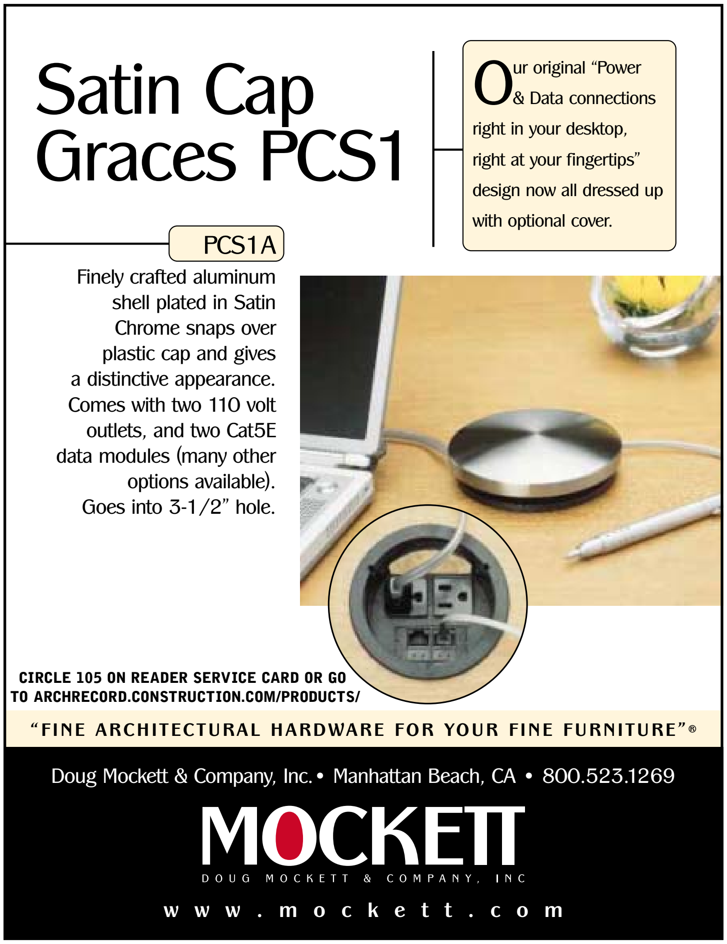
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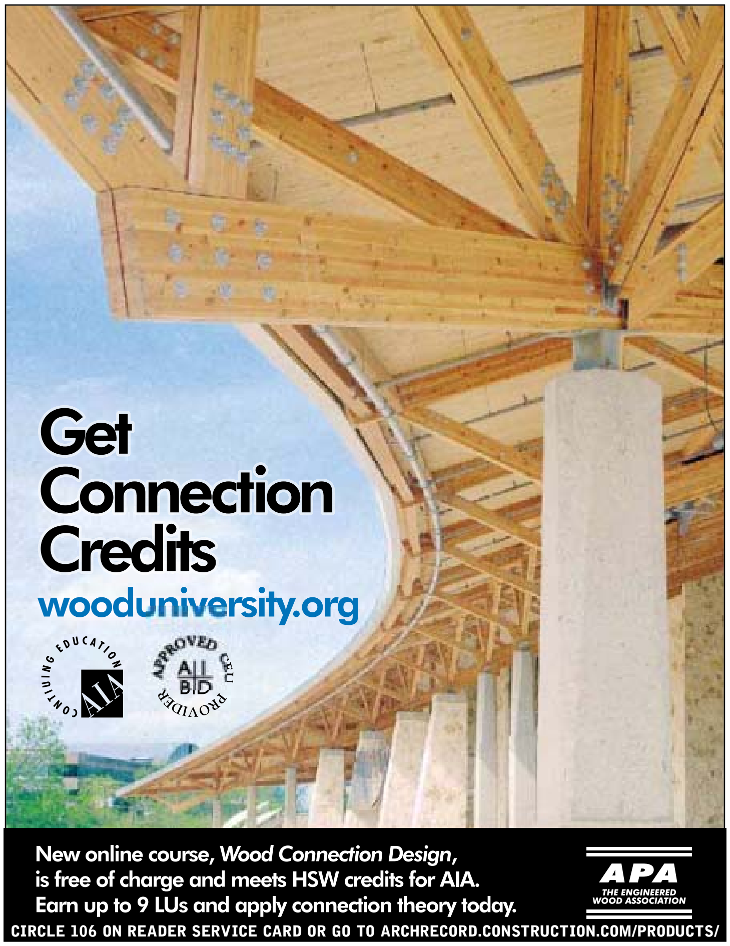
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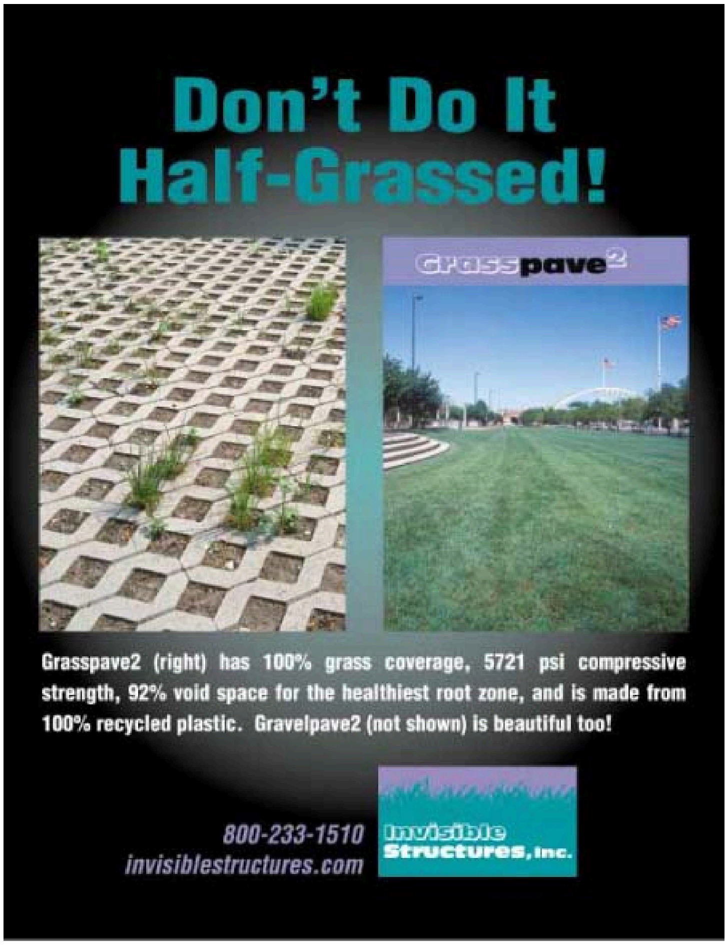

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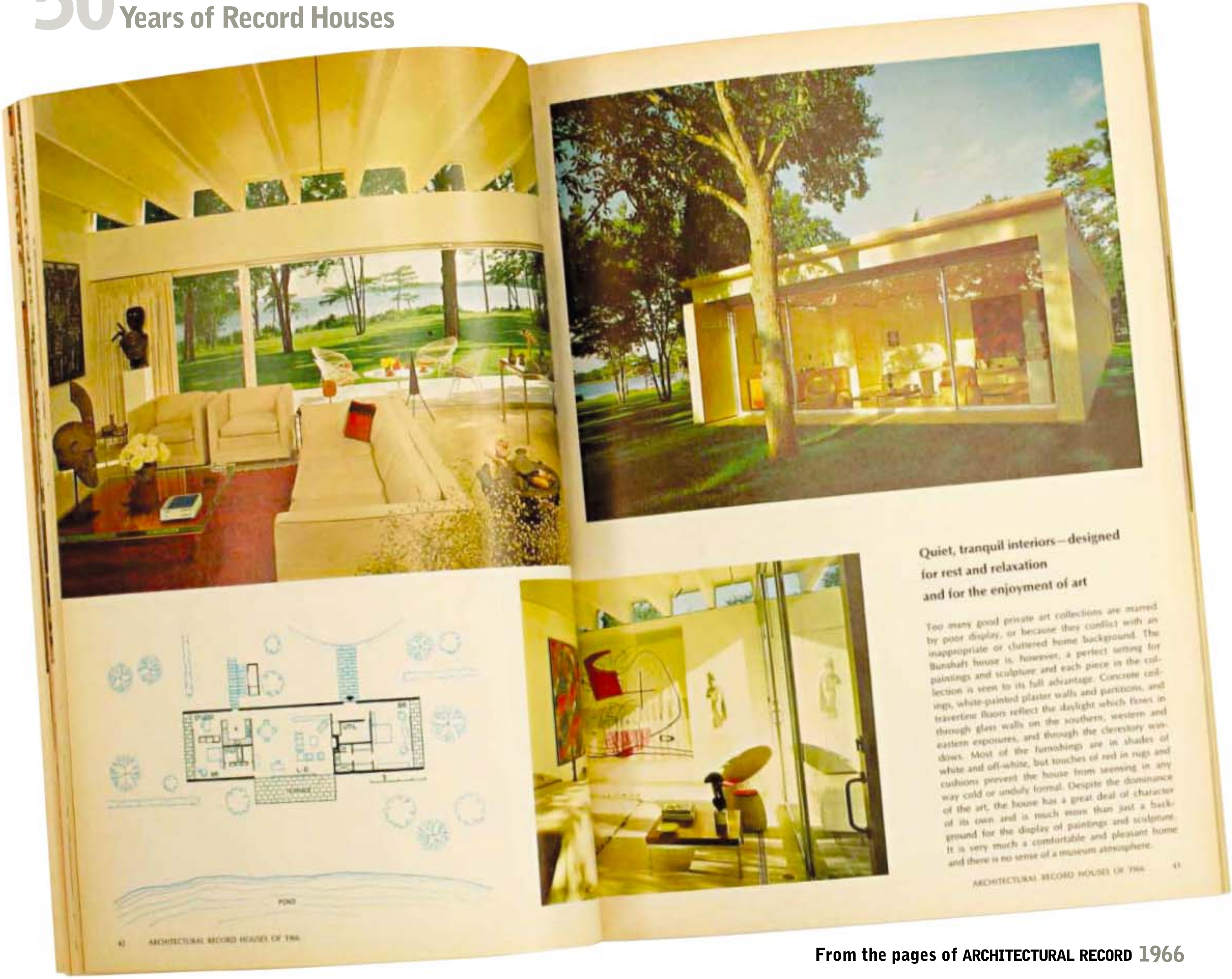

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Too many good private art collections are marred by poor display, or because they conflict with an inappropriate or cluttered home background. The Bunshaft house is, however, a perfect setting for paintings and sculpture and each piece in the collection is seen to its full advantage. Concrete ceilings, white-painted plaster walls and partitions, and travertine floors reflect the daylight which flows in through glass walls on the southern, western and eastern exposures, and through the clerestory windows. Most of the furnishings are in shades of white and off-white, but touches of red in rugs and cushions prevent the house from seeming in any way cold or unduly formal. Despite the dominance of the art, the house has a great deal of character of its own and is much more than just a background for the display of paintings and sculpture. It is very much a comfortable and pleasant home and there is no sense of a museum atmosphere.

ARCHITECTURAL RECORD HOUSES OF 1966

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From the pages of ARCHITECTURAL RECORD 1966

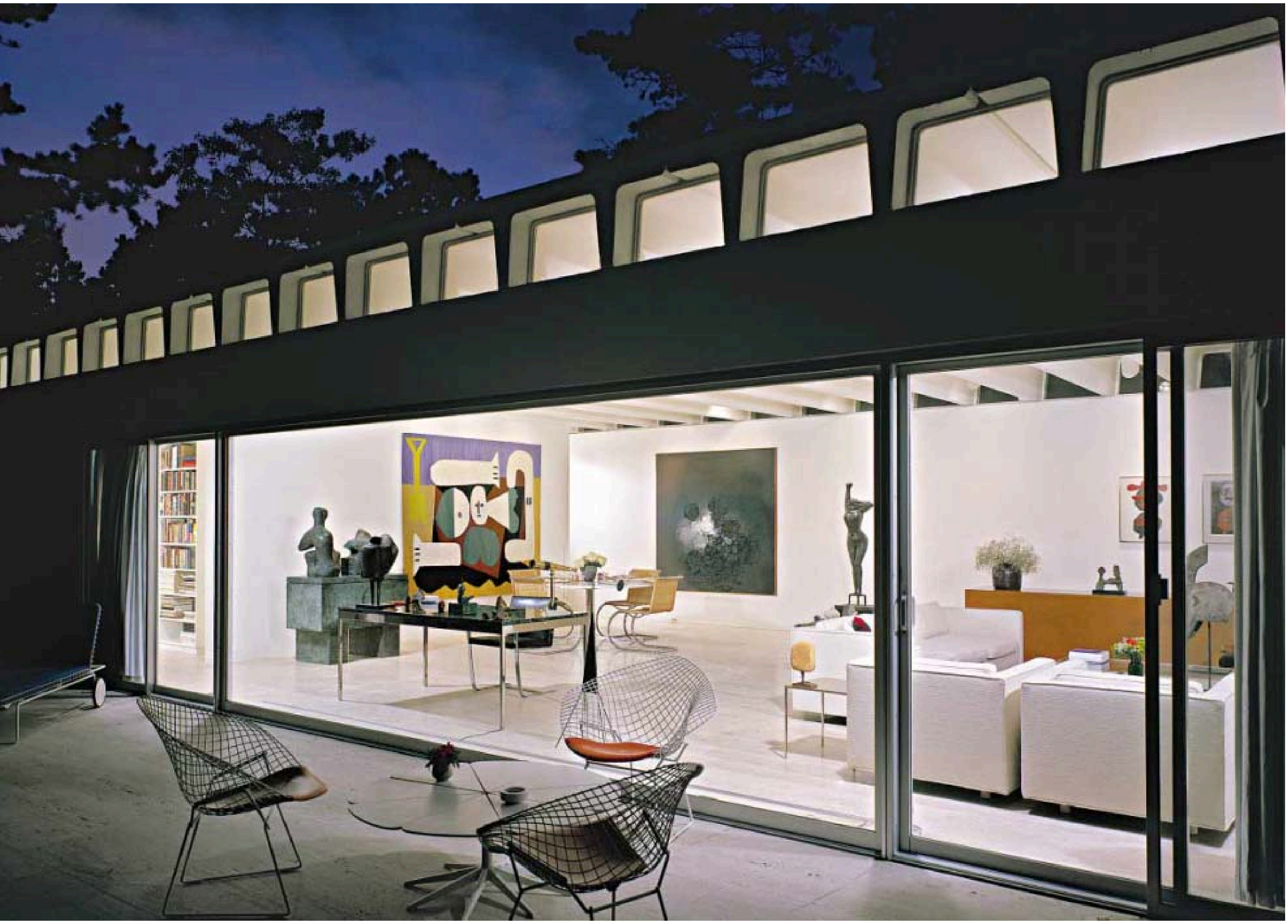
Bunshaft Villa Nears Its End

By James S. Russell, AIA

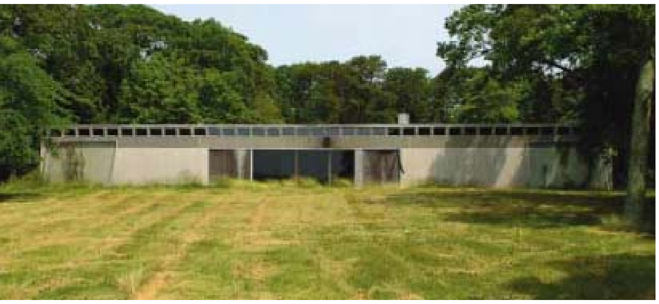
PHOTOGRAPHY: © EZRA STOLLER/ESTO

Gordon Bunshaft was at the height of his powers in 1963, when he designed an elegant weekend pavilion at the edge of Georgica Pond in East Hampton, a seaside village about 100 miles from New York City. A partner at Skidmore, Owings & Merrill, his work on projects like the Emhart Corporation, in Bloomfield, Connecticut, and the IBM headquarters, in Armonk, New York, defined a technologically progressive image of the American corporation as it relocated to lush suburbs.

The house Bunshaft built for himself and his wife, Nina, reflected ideas he was working out in corporate and institutional projects. Massive concrete walls faced in travertine marble supported 5-foot-wide, precast-concrete double-T beams. A broad glass plane opened to a picturesque vista across the pond, dune, and crashing ocean waves in the distance. It was also, as RECORD noted in 1966, an ideal setting for the couple's art collection. "What was remarkable, absolutely amazing, was the ensemble," remarked Bunshaft biographer Carol Herselle Krinsky in an interview. Bedrooms at either end opened to outdoor rooms for sculpture. "Against bushy



In its heyday, the house appeared radiant, as shown from the pond side (previous page). For the living room (above), the Bunshafts commissioned a tapestry from Picasso, which presided over their art collection. In more recent times (below), the house has become derelict.



(continued from previous page) bushes, he placed a plump Miro. On the other side of the house, a little group of thin birch trees rose behind a thin Giacometti."

Gordon died in 1990, and Nina later willed the property, including its collection, to the Museum of Modern Art, which removed the art and, in 1994, sold the house to decorating doyenne Martha Stewart. She gutted the place in anticipation of a remodel by London architect John Pawson, but put it up for sale when her legal problems mounted. Listed in 2003 at $10.5 million, the 2,400-square-foot structure did not attract buyers in a community that now favors getaways five times the size. This spring, Palm Beach, Florida–based textile magnate Donald Maharam and his wife, Bonnie, bought it for a sum reportedly near $9 million.

The Maharams intend to demolish the house and rebuild on its footprint. "To restore the house would mean rebuilding it," explained David Pill, of Winchester, Massachusetts, the Maharam's architect (and son-in-law), citing extensive foundation problems. The pending demolition looks certain, and comes only a short time after Emhart was bulldozed.

"Of course, it's a bad idea to take it down," commented Krinsky. Since it was conceived as an ensemble of art and architecture, however, the house alone, she added, "is far less valuable, I regret to say." The Maharams have rejected the creation of a Bunshaft "facsimile," says Pill. The new design "will be a Modern house with quite a lot of glass, and it will be low." Equaling the significance of the Bunshaft house is not Pill's primary agenda. "I'm trying to create a nice piece of architecture for my clients," he responded. "It will be what it is." ■

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